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Address

PREVENTABLE DEAFNESS

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A survey of otology shows that great advances have been made in the treatment of deafness, but prevention of deafness has, up to this point, only been touched on. The laity are well informed on the necessity of otologic aid in cases of active inflammation or loss of hearing and they are fully aware of the futility of our effort to restore hearing in some chronic cases of deafness. Is it not time that they were enlightened on the subject of the prevention of deafness and should we not instruct them to use this knowledge before deafness has progressed beyond the power of restoration? We should make the laity realize that a little attention in season can prevent serious irremediable loss later on. Especially is this knowledge of importance to persons having deaf ancestors.

Nearly all deafness is preventable. Consequently the study of preventable deafness embraces a consideration of all otology, except that part dealing with the equilibrational apparatus.

Cases of middle-ear diseases are so numerous proportionately that the cases of deafness from other sources may be neglected without much detriment to the economic value of our conclusions. We shall, therefore, omit the consideration of cases of meatal deafness, cases of deafness due to peripheral sensory defect, and cases of senile deterioration of hearing. The cases of meatal deafness are easily remedied; the number of the cases of deafness due to sensory defect is small, and senile deterioration of hearing is physiologic. We will limit ourselves to the consideration of preventable deafness from middle-ear diseases alone.

In order to understand how deafness may be prevented, we must examine into the etiology, pathology, course, treatment, and final results of the affections causing the deafness.

We find that all middle-ear changes appertaining to our subject can be placed in two pathologic groups:

1. Ulcerative, necrotic, hypertrophic, adhesive and cicatricial processes.

2. Atrophic and sclerosing processes.

There are two fundamental etiologic factors which contribute to these pathologic groups: (1) infection and (2) toxic vasomotor paresis usually of infectious origin. The paresis and exhausted vasomotors are probably always combined with infection and are chiefly due to it. This is equivalent to saying that all forms and almost all cases of middle-ear deafness are actually the results of infection. The truth of this statement is obvious in the suppurative cases. In the cases of progressive deafness, the true etiologic cause is less apparent, but the cause may be demonstrated on inspection of the nasopharynx, where inflammatory conditions are always found. The etiology is proved by the good results of treatment of these infections.

To prevent infection, we must avoid infectious organisms. We know that nearly all infectious organisms reach us through the upper air tract, entering with dust. We must, therefore, adhere strictly to the rules of hygiene relative to pure air.

The normal function of the mucous secretion is most important in order to prevent infection. Mucous secretion entangles the micro-organisms which enter with the inspired air. Thus they are rendered innocuous and are wafted to localities where they can do no harm.

Local resistance to infection requires a healthy mucous membrane with normal mucous secretion. This secretion is affected by constitutional conditions and is especially impaired by derangement of the digestive and nervous systems. There is, for instance, a thick mucus produced in constipation and in faulty metabolism, and an absence of mucus with the dry throat accompanying acute mental shock.

Next to the avoidance of infectious organisms, the maintenance of resistance to these organisms is of the utmost importance. Infection may best be resisted when the hygienic conditions are ideal. There must be sufficient sleep and exercise, proper food and drink, and an unlimited supply of fresh air.

A local soil retentive of infection is due to the inability of the individual to cope with the virulence of the infection or to thick mucus and to mechanical interference with the natural ejection of the mucous excretion containing the micro-organism.

Next to keeping the soil resistant to infection, the most important part of prevention is destroying infection. Efforts along these lines would result in preventing the great bulk of deafness, since over 80 per cent. of all deafness is due clearly to some form of local infection.

An infection which has already taken place is arrested by the maintenance of local hygiene, supplemented by antiseptics, by drainage, by surgery of the nasal fossæ, by surgery of adenoids and tonsils and by rigorous general hygiene of surroundings and habits. In acute inflammations, the nasopharynx requires special care in order to further tubal drainage and ventilation.

We find that with few exceptions deafness is the direct result of an infection of the middle ear or the indirect result of nasopharyngeal infection through its toxic influence on the vasomotors controlling the blood

vessels of the middle ear. The treatment of these infections can be divided into two chief divisions: (1) combating the infection and (2) maintaining or restoring nutrition.

Mechanical obstructions, as we all know, may be found in any part of the upper air tract, in the pharynx, nasopharynx, but most especially in the nose. These obstructions are lymphoid hypertrophies, turbinal hypertrophies and deformities of bone and cartilaginous framework. A very common functional obstruction to the natural expulsion of organisms is habitual mouth-breathing, and the consequent engorgement of the sniderion membrane.

There are two chief aims to which general hygiene is directed in order to maintain the general and local power of resistance to infection: (1) the maintenance of the mucous membrane of the upper air tract in a resisting condition, and (2) the maintenance of this mucous membrane in a condition so that it shall not be a retentive soil for infection.

Local hygiene requires attention to a great variety of details. In the first place, the nasal irregularities and obstructions demand correction because of their harmful respiratory and reflex nervous effects and also because, through hindrance to drainage, they foster local infections and the retention of toxic and infectious material.

Orthopedics of the facial bones are very important factors in the prevention of deafness. Orthopedics require the removal of obstructing tonsils and adenoids, regulation of irregular teeth, widening the alveolar arches, attention to intranasal structures, and the maintenance of efficient nasal respiration.

Not only does chronic engorgement of the turbinates and erectile tissues of the nose and nasopharynx require correction, but attention must also be given to its causes. The mechanical causes I have just mentioned. A more important class of causes we must not overlook, namely, those coming under the head of vasomotor paresis, which is usually of toxic origin.

The infections of the nasopharynx require special treatment, since in this locality the infections are likely to spread to the ear, or to obstruct the tubes by the swelling which they cause, or when by their local toxic action they may produce local vasomotor paresis. To sum up, the hearing is injured by the extension of infection into the ears, by local paresis of the vasomotors or by the mechanical obstruction of the tubes.

Besides the care of the grosser nasopharyngeal infections, especial care must be taken to detect and correct the concealed nasopharyngeal infections which are without suppuration and which are accompanied by no more than a slight swelling or redness of the mucous membrane. These concealed local infections usually occur on the posterior-superior wall of the nasopharynx. The mucosa is slightly thickened and sometimes covered with pathologic secretions. It is pale and slightly edematous, or red and rough, bleeding on slight contact with the cotton probe.

The second pathologic group of changes causing middle-ear deafness are the atrophic and sclerosing middle-ear processes. The etiologic factors concerned with this group are four: (A) infectious organisms; (B) a retentive soil; (C) an exhausted or inhibited vasomotor system, and (D) a toxic paresis of the sympathetic nerves. Infectious organisms (A) and a retentive soil (B) have already been considered, leaving Groups C and D for our further attention.

Deafness of the atrophic and sclerosing type, besides being due to altered blood supply dependent on cicatricial contraction consequent on infection of Groups A and B, is also due to (C) a functionally, exhausted or inhibited vasomotor system which may result from an abnormal mental state inhibiting the somatic functions and also form menstrual, obstetrical, or neurasthenic disorders.

We must safeguard the vasomotor function of the sympathetic nervous system, which controls the blood supply of the middle ear and consequently controls the nutrition of the sound-conducting apparatus. The efficiency of this system is of great importance in the prevention of deafness.

Our care is directed to the prevention and elimination of the injurious effects on the vasomotor functions caused by mental shock. We must also avoid fatigue carried beyond the point of physiologic recovery and the nervous effects of derangement of the reproductive system and take pains to correct the impaired vasomotor function of the ears left after the exciting cause has passed away.

The alterations of the blood supply of the ear, dependent on a pathologic inhibition or overstimulation of the vasomotor or sympathetic nerves, occur in three stages: active congestion, passive congestion and anemia due to lessened arterial supply. These functional conditions of the blood vessels of the middle ear are usually transient and do no harm. If, however, these conditions persist, trophic changes result, causing the atrophic and sclerosing diseases of the ear. The congestive states, if long continued, finally lead to the anemic state which is more or less permanent.

Sometimes the anemic state is primary, commencing by a spasm of the arteries, which after long duration causes atrophic and sclerosing changes of the middle ear from the impaired nutrition caused by the deficient blood supply.

The primary cause of the middle-ear vasomotor disturbances occasionally depends on inhibition or unstable control of the higher nerve centers brought about by exhaustion and shock.

Most of the vasomotor disturbances of the middle ear and the consequent atrophic and sclerosing conditions we see in the tympanum are due wholly to toxic influences which we group in Class D. These changes of the middle ear are exemplified by the atrophic and sclerosing middle-ear diseases, which sometimes follow typhoid fever or some other exhausting disease. It is, in fact, a toxic paresis of the vasomotors governing the blood supply to the middle ear.

The greater number of these toxic causes as we meet them in practice are due to very insidious results of long-continued absorption of toxins from the nasopharynx. These absorbed toxins affect the sympathetic ganglia in the neighborhood of the pharynx and thus cause changes in the tympanic blood supply and, finally, trophic changes in the sound-conducting mechanism of the middle ear.

One reason why these insidious forms of atrophic and middle-ear sclerosis are allowed to continue for so long a time is that their nasopharyngeal cause is overlooked, since there may be no local symptoms which attract the attention of the patient. The specialist must often search carefully before he discovers the slight abnormalities in Luschka's tonsil indicating the seat of the toxic process. The presence of the infection is often shown only by a slight redness or edema of this region.

The hereditary tendency noted in sclerosing middle-ear disease is obviously not real, but only apparent. The unstable nervous system, the weak digestion, and the

V 53
1909

unbalanced metabolic functions are inherited, but the exciting cause of the diseased hearing is lacking unless some accidental stress throws these weak functions out of balance. This stress gives the initial stimulus to the condition causing the middle-ear deafness. There is less physiologic disturbance required to start the middle-ear process in those disposed to deafness through heredity than in individuals of robust constitution.

Our success in preventing deafness when middle-ear disease exists is in proportion to the rapidity of cure of the middle-ear diseases. The acute inflammatory conditions require early energetic measures for drainage, with early myringotomy and mastoid evacuation in cases which will not drain.

In work about the mastoid region the preservation of the middle-ear structures assures the restoration of normal hearing following convalescence.

During convalescence from acute inflammation and after operations, inflation should be practiced in order to prevent contractions and adhesions and in order to keep the sound-transmitting structures in their normal positions. In these cases the infection of the nasopharynx, the tubal ventilation and the local and general vasomotor condition need correction.

Syphilitic middle-ear diseases respond readily to antisyphilitic treatment with complete restoration of function in early cases.

Periodical examination of patients is necessary for success in preventing deafness. This is true in all cases of deafness, but is especially true for the prevention of the insidious deafness due to middle-ear atrophy and sclerosis. If the patient waits until he is already deaf before seeking relief, he will bring to the specialist a far-advanced sound-conduction disease very resistant to treatment. From what has gone before, we conclude that all cases of middle-ear deafness can be avoided if rigid hygienic care and medical supervision are employed to safeguard the individual. We also see that the restoration of a defective middle ear is possible if structural changes are not advanced.

CONCLUSIONS

Practically all deafness is due to the results of infection. Causes leading to infection are to be corrected, the soil is to be rendered non-retentive and the existing ear defects are to be treated at once. Avoidance of the infectious organisms, the maintenance of the nasopharynx in a healthy condition, the eradication of any existing infection, and the avoidance of impairment of the sympathetic nervous system through toxic action of fatigue or infection, will insure against deafness. To insure immunity from deafness, it is necessary for the individual to undergo a periodical oto-rhino-pharyngeal examination, perhaps once a year, so that any incipient middle-ear disturbance may be detected and corrected before the condition has become established.

41 East Thirty-third Street.

Recent Work on Aphasia.—All the worthy recent literature on aphasia is gone over by James Collier (*Brain*, 1909, xxxi, 523). About seventy-eight articles and books, most of which have appeared within the last three years, are reviewed and a digest of them is given. Of recent years the localization of centers of expression has been more conclusively worked out. The method of surface examination and serial macroscopic sections has been replaced by the more accurate method of serial microscopic sections throughout the brain as the essential basis of the localization of the lesion in cases of aphasia. Collier's opinion is often apparent in the discussion of the recent controversies on different phases of the subject.

Original Articles

THE VISUAL FIELDS IN HYSTERIA

A CLINICAL STUDY OF FIFTY CASES*

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The majority of systematic writers on hysteria assert that the most common ocular stigma of this neurosis is a concentrically contracted field of vision. From time to time, however, suggestions have been made intimating the possibility of error in this statement. As my experience seems rather to agree with the minority, I determined to tabulate a relatively small number of cases, the records of which were complete, and present conclusions from this series alone. The results here obtained, however, agree with the findings in a much larger number of cases, the records of which are too incomplete for publication.

Whether the lesion in hysteria be central or peripheral, whether due to anesthesia of the retina, or entirely a matter of suggestion, is not to be considered in this paper.

The cases are all from the neurological or ophthalmological clinic in the University of Michigan. Dr. C. D. Camp, clinical professor of neurology, made all the examinations except those of the eyes, which were made in the ophthalmologic department. All cases in which there were errors of refraction or pathologic lesions that could in any way interfere with the fields were eliminated; otherwise the cases were taken consecutively, and in no way are they selected cases. The fields were all taken on the same perimeter and under like conditions.

Von Graefe suggested that the concentric limitation of the visual fields was the most important ocular sign of hysteria, while dyschromatopsia was first clearly described by Galezowski in 1886. Parinaud says, "The essential sign of hysteria is the concentric contraction of the field of vision, to which may be added in certain cases a particular form of dyschromatopsia." He also thought that the contracted fields were associated with amblyopia. Describing dyschromatopsia, he says, "The narrowing of the visual field, which explains the insensibility to white light, constitutes the fundamental fact of hysterical amblyopia. The disorder of vision as regards colors is a superadded fact which is not constant." In speaking of the field Parinaud says, "It represents an insensibility of a portion of the field to white light, and this insensibility develops from the circumference to the center in such a way that a graphic drawing of the contraction would be represented by an almost circular line." Binswanger, in speaking of the views of the French school which holds that the concentric narrowing of the visual field is the most frequent ocular stigma in hysterical subjects, says, "The skepticism with which we regard the statements of Charcot's school, Galezowski, Parinaud, Landolt, Féré, and others, increases in direct proportion to the growth of our experiences on the subject; for these investigators attribute too much importance to the concentric contraction of the visual field in hysteria." In this country de Schweinitz, in speaking of the concentrically contracted fields, says, "The value of this symptom seems

* Read in the Section on Ophthalmology of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

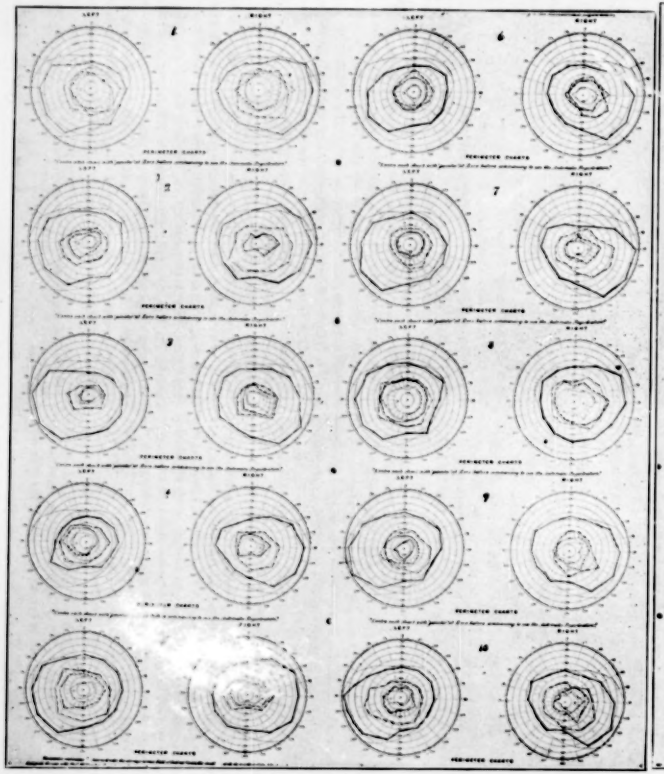

Fig. 1.—Visual fields in Cases 1-10. ..... indicates green field. * — — — indicates red field. —.—.—. indicates blue field. ——— indicates form field.

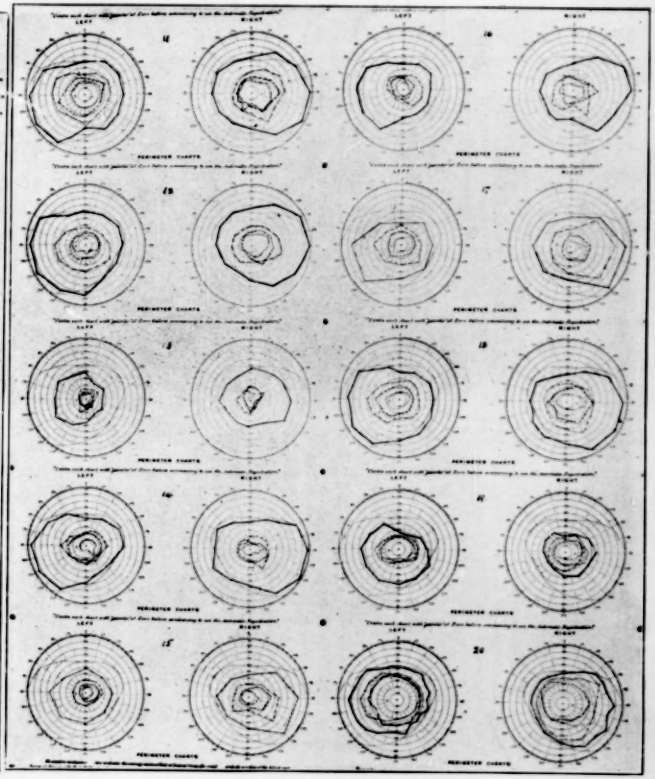

Fig. 2.—Visual fields in Cases 11-20.

V 53
1909

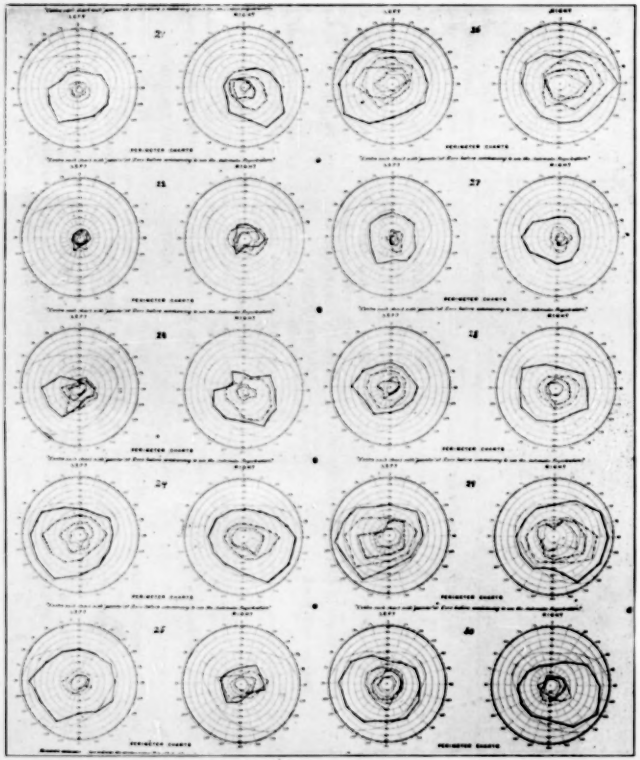

Fig. 3.—Visual fields in Cases 21-30.

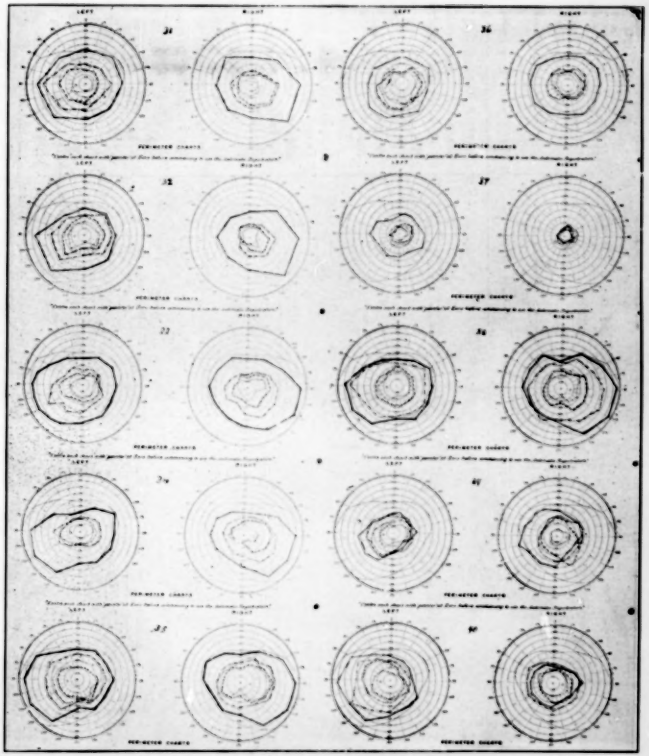

Fig. 4.—Visual fields in Cases 31-40.

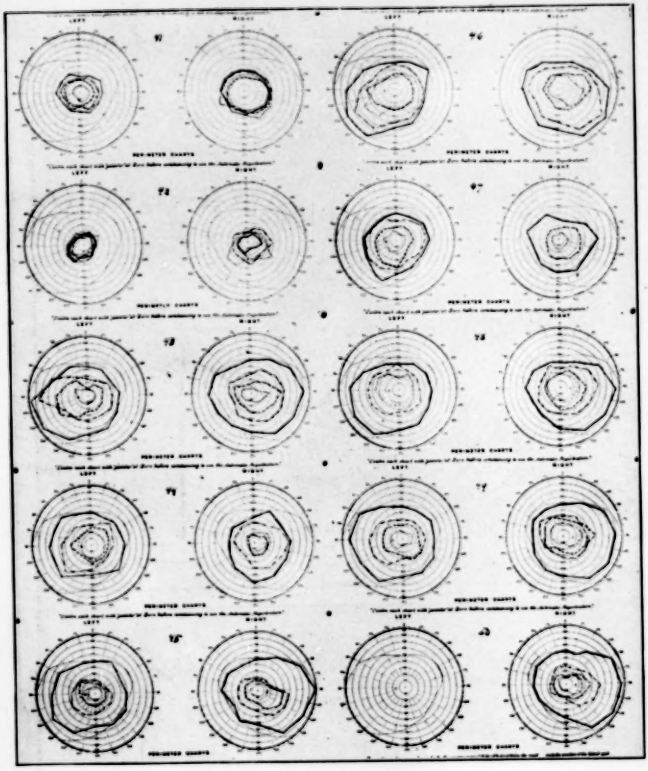

Fig. 5.—Visual fields in Cases 41-50.

exceeding great, although J. K. Mitchell and myself were unable to find it as frequently among hysterics whom we examined as would appear to be the case in the French clinics." Hansell and Sweet, speaking of the fields, say, "The predominant peculiarity of an hysterical contraction of the visual fields is that, while in every other disease where peripheral limitations occur the color field is affected in equal or greater proportion than the field for white, in hysterical amblyopia the field is less affected for colors than is the field for white. The field for red is apt to be less affected than the field for blue. This reversal of the order and extent of the field for white and colors is positive evidence of hysteria; it can not be simulated and it is caused by no other ocular disorder. It is readily determined and possesses a diagnostic value equal to the anesthesia of the glottis and pharynx so frequently referred to as pathognomonic of this neurosis."

Table 2.—Stigmata Found in Fifty Cases of Hysteria

Character of Field.	Stigmata Found. No.	%
1. Dyschromatopsia	36	72
2. Dyschromatopsia with general contraction	17	34
3. Dyschromatopsia with concentric contraction	15	30
4. Contraction of fields without dyschromatopsia	13	26
5. General contraction without dyschromatopsia	9	18
6. Concentric contraction without dyschromatopsia	4	8
7. Concentric contraction, irrespective of dyschromatopsia	20	40
8. General contraction, irrespective of dyschromatopsia	27	54
9. Amblyopia	4	8

The amount of the reduction in the visual fields varies from slight contraction to almost the fixation point. As was suggested by Janet, the amount of contraction has no direct relation to the acuity of vision, all hysterics being able to go about their regular life regardless of the limitation in the fields.

In Table 1 the stigmata at the head of each column are numbered and after each case is placed the numbers representing the stigmata found. A photograph of the field in each case is also attached.

An analysis of the fifty cases under discussion gives the result shown in Table 2.

CONCLUSIONS

1. Dyschromatopsia is more common than concentrically contracted fields in the ratio of 72 to 40.

2. There is no relation between the contraction of the visual fields and amblyopia, the former being present in 96 per cent. of the cases, while the latter was found in 8 per cent.

3. There is no constant relation between the areas of anesthesia and concentrically contracted fields. Of the patients with anesthesia 28.4 per cent. showed concentrically contracted fields, while 75 per cent. showed dyschromatopsia.

Note.—Not a single case of hysterical hemianopsia has been recorded in either the ophthalmologic or neurologic clinics of the University of Michigan.

The suggestibility of the patients was noted in but few of the cases; otherwise the records were complete.

I wish to acknowledge the assistance rendered me by Dr. George M. Waldeck in the compilation of these cases.

ABSTRACT OF DISCUSSION

Dr. E. C. Ellett, Memphis: A difficulty of no small moment is the care that is necessary to secure trustworthy perimetric observations. This becomes of less importance the larger the number of cases observed, unless the taking of the fields has been delegated, as the giving of anesthetics sometimes is, to the most inexperienced assistant. The length of time required, the mental instability of many of these patients, and the difficulty of holding their attention to the matter in

V 53
1909

TABLE 1.—TABULAR VIEW OF OCULAR AND OTHER SYMPTOMS IN FIFTY CASES OF HYSTERIA

No.	Sex	Age.	Eye Symptoms. 1. Dyschromatopsia. 2. Contracted field. (a) Concentric. (b) General. 3. Amblyopia. 4. Scotomata. 5. Intermittent field. 6. Monocular diplopia. 7. Tubular vision.	Other Special Sense Symptoms. 1. Hearing: Hys. deafness. 2. Smell: Anosmia. 3. Taste: Partial loss. 4. Speech: Aphonia.	Sensory Symptoms. 1. Anesthesia of conjunctiva. 2. Anesthesias. 3. Graves' sign. 4. Allochiria. 5. Hyperesthesias. 6. Paresthesias. 7. Hypalgesias. 8. Hyperalgesias.	Motor Symptoms. 1. Paralyses. 2. Tremor. 3. Contractures. 4. Incoordination.	Paroxysmal Attacks. 1. Clavus. 2. Globus hystericus. 3. Epileptoid attacks.	Loss of Reflexes. 1. Absence of pharyngeal reflex. 2. Absence of plantar reflex.	Visceral Symptoms. 1. Vomiting. 2. Vascular and vasomotor disturbances. 3. Rapid respiration. 4. Cardiac disturbances. 5. Cough. 6. Yawning. 7. Phantom tumors. 8. Anuria.	Psychic Symptoms. 1. Hysterical amnesia. 2. Suggestibility. 3. Feeling of unreality. 4. Hallucinations 5. Hysterical trance.
1	F	15	1, 2-b, 3	....	2, 3	....	....	....	....	....
2	F	25	2-b	....	2, 5	....	2, 3	1, 2	....	....
3	F	16	1, 2-b	....	1, 2	....	3	1	....	....
4	M	..	2-a	....	1, 5	....	....	....	....	....
5	F	28	2-b	....	1, 2	....	....	2	....	....
6	F	43	1, 2-a	....	1, 2, 5	....	....	....	....	....
7	F	16	1, 2-b	....	1, 2, 3, 5	....	....	1	....	....
8	F	21	2-b	....	2, 3, 5	....	....	....	....	....
9	F	53	1, 2-b	....	1, 2 5	....	....	....	....	....
10	F	40	1, 2-b	....	1	....	....	1	....	....
11	F	29	1	....	1, 2, 3, 5	....	....	1	....	....
12	F	41	1	....	3, 7	....	....	....	....	....
13	F	47	1, 2-a, 3	....	6, 8	....	....	....	....	....
14	F	16	1	....	1	....	....	2	....	....
15	F	37	2-a	....	1, 2, 7, 8	....	....	2	....	....
16	F	35	1, 2-b	3	2, 3, 7, 8	....	....	....	....	....
17	F	17	2-b	....	2, 3, 7, 8	....	....	....	....	....
18	M	19	2-b	....	1, 6	2	3	....	....	....
19	F	51	1, 2-a	....	6, 8	....	....	....	....	....
20	F	16	1, 2-a	....	....	....	....	2	3	....
21	F	32	1, 2-a	....	....	....	....	1	....	....
22	F	17	1, 2-a, 3	....	2, 8	....	....	1, 2	....	....
23	F	14	1, 2-a	....	5, 8	....	....	....	1	....
24	F	..	1, 2-b, 6	4	1, 3, 8	....	1	2	4	1
25	F	48	o. s. 1, 2-b, o. d. 2-a	....	2, 6	....	....	....	4	....
26	F	33	1, 2-b	....	8	....	3	....	1	....
27	F	23	1, 2-a	4	1, 2, 3, 5, 7, 8	....	3	....	....	....
28	F	21	2-a, 7	....	8	....	1, 3	1	....	....
29	F	25	1, 2-b	....	1, 2, 3, 7	....	....	....	....	....
30	F	33	1, 2-b	....	1	....	....	....	....	....
31	F	59	2-b	....	6	....	2	2	4	....
32	F	16	1, 2-b	....	1, 2, 7	....	....	....	3, 4	2
33	F	48	1, 2-b	....	....	1	3	....	....	....
34	F	..	1, 2-b	....	6	2	1	....	....	....
35	F	13	1	....	8	1	3	....	1	....
36	M	29	1, 2-a	....	2, 5	....	....	....	....	....
37	F	53	1, 2-a	....	....	....	1, 3	....	....	1, 4
38	F	..	1, 2-b	....	6, 8	....	3	....	....	....
39	F	53	1, 2-a	....	6, 8	....	1	....	8	....
40	M	54	1, 2-a	....	7, 8	1, 2	....	....	....	1
41	F	35	1, 2-a	....	6, 7, 8	1	....	1, 2	....	....
42	F	39	1, 2-a	....	8	....	1	1	....	....
43	F	38	2-b	....	6, 7, 8	....	1, 3	....	....	....
44	F	10	1, 2-a	....	1	2	....	....	....	....
45	F	46	2-b	....	3, 5, 6, 8	....	....	....	....	....
46	F	..	1, 2-b	....	1, 6	....	....	2	....	....
47	F	30	2-a	....	8	....	1	....	4	....
48	M	19	1, 2-b	....	1	....	....	....	....	2, 5
49	F	19	1, 2-b, 3	....	1, 2, 5, 7, 8	....	1, 2	....	....	....
50	F	18	2-b	....	5	....	3	1, 2	....	....

hand are things familiar to us all. In looking over my records it seems that possibly on account of these things one is apt to confine his observations to the form field only, since we are told that contraction of it is one of the most reliable ocular symptoms of hysteria, and such records of course serve one poorly in such a discussion. The majority of my records are of patients seen for hysterical asthenopia, and in such cases the fields showed most often the general contraction referred to by Parinaud and others, and not always the reversal for colors. So that my experience, less in point of number of cases, and much less reliable in the thoroughness with which the observations were made, is not in accord with that of Dr. Parker. Not so much on account of personal experience, as on account of the difficulties of securing accurate results, I should say that we should be slow to accept a new view of this subject, a statement to which I am sure Dr. Parker will subscribe. Since the fact of great contraction of the fields has been questioned, especially by Binswanger, a case of traumatic hysteria might be mentioned where all colors were readily perceived. The fields, as shown, did not exceed 5 degrees in any direction.

DR. LUCIEN HOWE, Buffalo: I should like to know what perimeter was used, the way of using it, whether the same person was tested several times, and whether these fields were constant. We know that by simply changing the position of the head and not keeping the center of the eye practically in the center of the arc one can obtain almost any field desired.

DR. CASEY WOOD, Chicago: Has Dr. Parker noted any relation between the decided fields of contraction for white and the peripheral amblyopia? We all know, when the field for white is very much contracted in organic disease and especially if it occurs in both eyes, the patient is more or less conscious of defective sight; he has decided symptoms of tubular vision. In my experience, no matter how small hysterical fields are, not only is the patient able too get about readily but he is not at all conscious of the defect in the field. In only one case, so far as the record goes, does Dr. Parker speak of tubular vision. I regard the manner and method of measuring hysterical fields of extreme importance, because, in my experience, one may discover almost any sort of field, so far as the contraction goes, in hysteria. The patient easily becomes tired after a little while and if the examiner is not very careful he may reduce the field to different sizes on different days.

DR. G. E. DE SCHWEINITZ, Philadelphia: All manner of alterations in the visual field have been ascribed to hysteria, and the statements of observers have varied from those which maintain that concentric contraction of the visual field and inversion of the color line are diagnostic stigmata, to those of Babinski, for instance, which declare that this concentric contraction never occurs if the examinations are properly conducted. The characters of the true hysterical field are essentially the following: Concentric contraction is the insensibility of the field to white light, developing from the circumference to the center in such a manner that a graphic drawing of the contraction would be represented, to use the words of Parinaud, by an almost circular line, provided the word concentric is not taken in too literal a sense of the term. This contraction exists from the beginning, that is, it is not one which is developed during and by the process of examination; this contraction is usually, under ordinary conditions, an enduring one and does not materially change until recovery takes place; and the field is often a tubular one—in other words, the contraction maintains the same size, no matter at what distance the point of fixation of the examined eye is placed. The color field, also usually contracted, is not infrequently inverted, in the sense that the red circle exceeds in width the other color circles and may be in excess of that of white; very rarely this position is assumed by the green circle. Exceptionally, with or without the usual reduction of the white field, there is a greater extent than normal of the color lines, representing a form of hypersensitiveness to color reactions.

That a field of this character is an important help in the diagnosis of hysteria will be granted by most observers, and that it differs from the field in neurasthenia and other types of disease in which retinal tire is a prominent sypmtom, will probably also be maintained by most of those who have had experience in this line of cases, but because a visual field of this character is developed does not mean that the patient is hysterical. In other words, it is not pathognomonic of this affection. Fields exactly like it, or similar to it, may be found in Friedreich's ataxia; in hemorrhage into the internal capsule; in cases of brain tumor, as was long ago in the Charcot clinic and has since been confirmed by the observations of Bordley and Cushing; in cases of chronic headache, as I pointed out long ago, and in various toxemias, notably those of alcohol, lead, bisulphid of carbon and di-nitrobenzol. In connection with the last named toxemia Nieden's investigations will be remembered. Moreover, similar visual field phenomena have been observed in patients with epithelial xerosis of the conjunctiva and night-blindness. The point to be insisted upon is that the visual field of hysteria, that is to say, of pure hysteria, has distinct characteristics but is not pathognomonic, and it would be desirable if Dr. Parker would point out exactly what he means by amblyopia, and what the character of the concentric contraction of the visual field was in his cases, that is to say, whether it was developed as the result of repeated examinations, or appeared from the outset. I entirely agree with him that hemianopsia as an enduring phenomenon never occurs in hysteria.

DR. C. H. MAY, New York: Recently I examined a considerable number of patients in whose fields neurologists and surgeons were interested, at Mount Sinai Hospital, especially following Dr. Cushing's investigations of the inversion of the color fields in patients suffering from cerebral tumor. The examination was interesting, and to a certain extent confirmed Dr. Cushing's views; in some of the cases there was inversion, in others there was none. In connection with these cases I took a great many fields for the purpose of control, with unexpected results; the number of control cases thus examined is not yet sufficiently large to make it worth while publishing—there have been but 50 or 60 of such examinations in which the work was carefully done. I found that in a few patients who appeared to be absolutely normal in every way, in whom hysteria had been excluded and in whom there was no ocular disease, there was inversion of the color fields. I agree with Dr. Howe that unless the perimetric observations are made very carefully, they are of no importance. If others confirm the findings concerning inversion of the color fields in normal individuals, this symptom will lose some of its importance as being indicative of hysteria.

DR. WALTER R. PARKER: In regard to Dr. Ellett's experience in the taking of the fields in the cases that have come to him, if I understand him correctly, all of these patients were amblyopic; that is, had temporary loss of central vision, and are limited entirely to that class of cases which would not make a very broad conclusion possible from his experience. We could not fairly determine the nature of the fields in hysteria without taking patients in the general class of hysteriacs; not from amblyopic hysteriacs as Dr. Ellett has done. The McHardy perimeter was used. The element of error is always possible. The patients were instructed that they must keep the eyes directly to the front. The eye was carefully placed as nearly as possible on a level with the center of the perimeter. The field otherwise was taken in the regular way. I could not vouch for the detail of the field as presented here any more than I have stated. The few I saw were taken carefully, and I believe all of them were. Unfortunately, all these patients were not examined for tubular vision. I would answer this question from experience outside of this report of cases. All patients with tubular vision have hysteria and no matter how great the contraction of the visual field they can go about in their usual way. All the patients mentioned in this paper were sent to me as hysterics. The point that Dr. de Schweinitz made, that hysteria can not be diagnosticated from the field alone can not be too forcibly emphasized. I do not think anyone should make a diagnosis of hysteria from the fields alone except in cases showing tubular vision. Tubular vision can not be anything else but hysteria. The term hysterical amblyopia, as I have used it, refers entirely to loss of central vision. It is true in speaking of hysteria, that all organic disease should be eliminated, so also is it true in speaking of dyschromatopsia as a symptom of an organic lesion, that hysteria should be eliminated. The work was, I believe, carefully done, and I submit the results, having nothing to prove or disprove.

V 53
1909

PITUITARY TUMOR IN ITS SURGICAL RELATIONS

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The physiology of the pituitary gland still presents many unsolved problems. Jakob Lewin[1] in 1906 summarized the situation as follows:

> For some (Roth, Widersheim, Corning, Strumpell) the hypophysis is merely a rudimentary organ which has no essential function. According to other authors (Schiff, Marinesco, Wolf, Gemelli) the function of the gland is essential to life. Regarding the character of the gland's function there is also divergent opinion. Wolf, for instance, believes that it is hemolytic, while Liegois insists that it is hematopoietic in action, and Oliver again insists that it regulates the blood pressure. The majority hold that the hypophysis is a ductless gland that has an influence over the nervous system, or has something to do with the red blood corpuscles, or finally that it neutralizes some substance harmful to the organism.

Paulesco, from experiments on dogs, also reaches the conclusion that the pituitary gland is essential to life, and his position is supported by Cushing.[2]

In the peculiar condition of acromegaly the changes in the bones and tissues generally are invariably associated with a tumor of the hypophysis or distinct changes in its parenchyma, but many cases have been reported in which there was a tumor of the hypophysis not attended by acromegaly. In the acromegalic cases it is quite evident that there is a material disturbance of the ordinary processes of growth and nutrition giving us gigantism if the condition develops before the ossification of epiphyses with the shafts of the long bones is complete, and the gorilla type when the condition develops subsequent to skeletal completion. It is now also possible to gather a group of cases in which it is evident that disease of the pituitary is associated with lack of general development, often with peculiar fatty conditions, and particularly with disturbance of the growth and function of the genital apparatus. Hudovering and Fuchs,[3] as well as a long list of observers, have noted that in cases of acromegaly impotence marked the men and amenorrhea was invariably among the women. H. Starck, for instance, reports a case of hypophysis tumor with acromegaly in a woman of 39 whose menses had disappeared eleven years earlier. Haushalter and Lucien[4] have pointedly called attention to infantilism in a case of tuberculous tumor of the pituitary. A child of 6½ presented the conditions of a child of 3. Biro[5] and Finckelberg[6] have noted general lack of development and particularly a retention of the infantile character of the genitals.

Fichero[7] reports that in the cases of a number of castrated bulls and cocks examination of the hypophysis detected that it invariably was enlarged in its anterior portion; he believes that there is some sort of compensatory relation between the genitals and the hypophysis. Nazari has also noted rudimentary genitals in a case of hypophysis tumor. E. Levi[8] reports two cases of infantilism in sisters, in both of which instances there probably was a pituitary tumor as shown by the excavation of the sella, apparent in the *x*-ray picture, but he does not seem to realize the relation between the non-development and the pituitary growth. Von Eiselsberg calls particular attention to the genital peculiarity in his first case of pituitary removal.

A. Frohliches perhaps first insisted on the relation of the hypophysis to general adiposity and genital atrophy, although P. Schuster had already published a list of such cases as being of a cerebral character. Erdheim, on apparently inadequate grounds, thought that the infundibulum was more precisely related to these physical changes. Pituitary changes in the adiposis dolorosa of Dercum are also found.[9] Recently O. Marburg[10] reports several observations tending to show a relation between general adiposity and the pineal gland. He would, however, group the cases of adiposity and genital atrophy associated with hypophysis affections into three classes: (1) simple adiposity; (2) adiposity with genital atrophy; (3) simple genital atrophy. To these, I think, we should add another, namely, general retardation of physical and especially of sexual development (Fuchs, Froelich, Stewart), as well as the clinical type of acromegaly. From every point of view the association of the hypophysis and the genitalia becomes evident and diagnostically significant.

Marburg further suggests that hyperfunction of the pituitary results in acromegaly; hypofunction produces general adiposity and genital dystrophy, while complete pituitary defect produces a severe cachexia, analogous to the cachexia of complete thyroid destruction or ablation. Marie, however, considered acromegaly as the result of reduced hypophysis function, while Massalongo, Benda and Starck feel that it is caused by increased action. On the other hand, Gauthier, Strumpell and Arnold insist that the acromegaly is the result of a metabolic disorder first showing itself in hypophyseal change. The contention of Benda appears to be most in accord with all the facts.

As I shall have occasion to note in the cases I am to report, this apparent dependence of genital growth and function on the pituitary furnishes us an important diagnostic set of symptoms and signs.

Regarding the symptomatology of hypophysis tumor when unattended by acromegaly, which when present is usually so pronounced as to make the diagnosis self-evident, we are confronted with a series of symptoms that may embrace all those of ordinary brain tumor, but commonly, and probably always at first, are restricted to a few. These, however, as I hope to show, are sufficiently definite so that, with the aid of the *x*-ray, the diagnosis may be made with certainty. Hypophysis tumor, when occurring in children, and not producing acromegaly, stunts the growth and the physical and especially the sexual development. The mental qualities may not be materially affected. Owing to the impingement of the tumor or its neck on the optic chiasm, vision is sooner or later impaired, and optic atrophy sooner or later develops. In the early period the atrophy is definitely limited to the nasal half of the disc and this is attended and even preceded by loss of vision in the corresponding half of the field. Bitemporal hemianopsia practically is always due to involvement of the posterior portion of the chiasm, and its detection leaves almost no doubt that it is secondary to disease of the pituitary gland. The rudimentary condition of the genitals or the loss of genital function in those who have once attained it, impotence in men and

1. Lewin, J.: Inaug. Diss., Berlin, 1906.
2. Cushing, Harvey: Some Principles of Cerebral Surgery, THE JOURNAL A. M. A., Jan. 10, 1909, lii, 184.
3. Hudovering and Fuchs: Jahrb. f. Psychiat. u. Neurol., xxvi, 239.
4. Haushalter and Lucien: Rev. Neurol., Jan. 15, 1908.
5. Biro: Deutsch. Ztschr. f. Nervenh., xxxiv, 227.
6. Finckelberg: Deutsch. Ztschr. f. Nervenh., xxxiv, 21.
7. Fichero: Deutsch. Ztschr. f. Nervenh., xxxiv, 44.
8. Levi, E.: Nouv. iconog. de la Salpêtrière, October, 1908.
9. Price: Jour. Nerv. and Men. Dis., March, 1909.
10. Marburg, O.: Deutsch. Ztschr. f. Nervenh., December, 1908.

amenorrhea in women, have a very definite significance in this connection. To this may be added the occasional development of general adiposity and genital dystrophy, of painful adiposity and of acromegaly.

The *x*-ray is capable of furnishing a picture which clearly outlines the sella turcica (Fig. 1), and any enlargement in this bony depression can be positively correlated with an increase in the size of the pituitary body. This was first clearly stated by Oppenheim in 1899. The *x*-ray pictures which I submit in connection with the records which are to follow, when compared with the picture of the normal sella turcica, show at once the value of this diagnostic procedure.

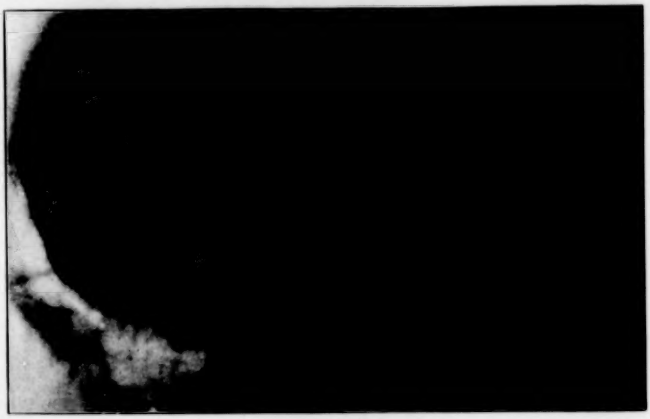

Fig. 1.—Normal head, showing location and size of the sella turcica, marked by +; full size.

Finally the question arises whether a diagnosis of pituitary tumor having been made, it is justifiable to ask the surgeon to remove the growth. If, as Paulesco and Cushing insisted, life is impossible in dogs without the pituitary, one may hesitate to establish a rapidly fatal condition for one which is less so, but it must be borne in mind that the animal experiments have been made on healthy dogs, and that the entire pituitary in full functional activity has been at once removed. In diseases of the gland the impairment has been of gradual development, and it is not impossible that other analogous glands have assumed its function to some degree, or that the organism has become slowly habituated to its absence. It is also likely that, should it be proved that life is impossible without some pituitary function, this might be supplied by pituitary feeding in the same way that has proved so successful in the analogous relations of the thyroids and parathyroids. Besides, animal experiments are not always absolutely applicable to man. Most convincing of all is the fact that in a number of human cases the pituitary has been removed without any material danger to the life of the patient. Time perhaps as yet is not sufficiently long to justify the conclusion that the pituitary is not a vital necessity or that some substitution must be made for it.

The surgery of the pituitary is a new field that has been explored only to a limited extent. Sir Victor Horsley has operated in a number of cases of pituitary tumor; his plan of procedure is to make a large opening on one side of the head, preferably the right, and approach the pituitary from the side, the steps of the operation being similar to those for the extirpation of the trifacial ganglia. He advises me that he is shortly to publish his cases. The temporosphenoidal lobe is lifted by the use of broad spatula-like retractors, and the tumor is finally seen by its lateral aspect and incised or scraped out as the case may require.

A modification of this operation was done for me by Dr. L. L. McArthur, of this city, by making the incision in the scalp and skull farther forward, so as to approach over the orbital plate and under the frontal lobe as will be indicated in connection with the report of a case. This route also presented very serious difficulties.

A second method of operation has been developed by Schloffer[11] on the plan worked out by Tandler and Muscovitz. It consists in making an incision down the middle of the brow and along the lateral aspect of the nose, which is then reflected to the opposite side, the nasal bones being suitably divided. The septum of the nose is severed, the turbinate bodies removed, and finally the vomer leads directly to the base of the body of the sphenoid bone. On its removal nothing but a thin shell of bone separates the pharynx and the nasal space from the tumor (Fig. 2). Schloffer's patient, operated on in this fashion, lived seventy-five days; the wound healed soundly, but brain infection eventually destroyed the patient.

Von Eiselsberg, of Vienna, has operated in five cases in this manner. He fully describes[12] the technic of the operation, in which he also opens the frontal sinus and thereby facilitates his approach to the tumor. He credits this sinus opening also to Schloffer.

By this method Hochenegg has operated in two cases; the first patient, operated on over a year ago, according to a personal report from him, remains in excellent health. This was a case of acromegaly, and most interesting recessional changes have occurred in the enlarged proportions of the extremities, jaw, etc., thus practically proving the causal relation of the pituitary disease and the value of the operation.

Von Eiselsberg's first patient, operated on June 21, 1907, not only made an excellent recovery from the operation, but the very prominent symptoms of brain tumor subsided and the condition of the eyes even improved, so that at the date of the last report the pupil had regained its activity for light and vision was good enough to enable the patient to travel on the railways. Von Eiselsberg has reported three operations by this method.[13] He has also operated in one or two other

11. Schloffer: Beitr. z. klin. Chirurgie, 1906, l, 767; Wien. klin. Wchnschr., 1907, No. 21.
12. Von Eiselsberg: Arch. f. klin. Chir., lxxxvii.
13. Von Eiselsberg: Wien. klin. Wchnschr., 1909, No. 8.

V 53
1909

cases which have not as yet been reported, including my Case 4, making five in all.

In this country Cushing has operated after this method on at least one patient who was shown before the American Surgical Society at its annual meeting in Baltimore this year.

While the choice of operation is pre-eminently a surgical question, my own view is that the nasal route is the best. The pituitary tumor is practically extracranial, being located in its very definite bony receptacle below the level of the cranial floor until by abnormal growth it rises into the cranium. As shown by several of my radiograms the tumor actually descends into the sphenoidal sinus. As it lies so close to the nasal spaces, this route can under proper aseptic measures constitute a less disturbing avenue of approach than through the lateral aspect of the skull which necessitates such violent handling of the brain as seriously to imperil the life of the patient. To operate in two stages by opening the head on the opposite side from which the approach is to be made, as formerly suggested by Cushing, does not seem to me to constitute a material advantage. When the tumor is of comparatively small size, I do not believe it can be reached by the intracranial route.

It is, however, a fact that the nasal operation results in considerable facial deformity, a deep depression being occasioned at the root of the nose, but in a life-saving measure cosmetic considerations are of minor importance. Improved technic may also largely obviate this objection.

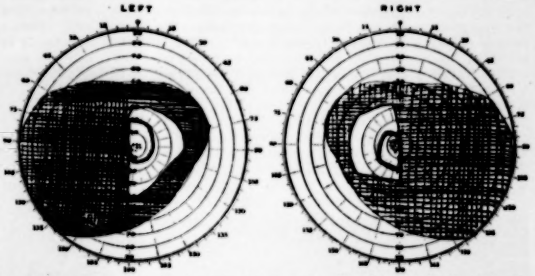

Fig. 3.—Bitemporal hemianopsia in Case 1. (In this and in the following charts the field of vision for red, where shown, is outlined by a heavy black line; that for green by heavy dots; that for white by a light black line.)

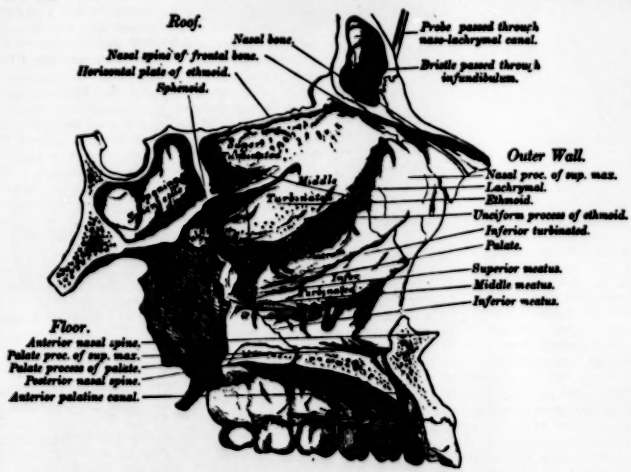

Fig. 2.—Relations of nasal spaces to the pituitary site (Gray).

CASE 1.—*Patient.*—Mrs. W., a woman of apparently good health, 39 years of age, was referred to me by Dr. Casey Wood, Aug. 3, 1907.

History.—The patient never had any pregnancies, and for eight or nine years had not menstruated. This function began at the age of 14 and was regular for a number of years. Her past history was peculiarly free from illnesses of all sorts, with the exception of diphtheria at the age of 18, followed by a paralytic involvement of the pharynx, disturbance of vision for the near point, and some involvement of speech and of muscular power. Since that time she had not considered herself robust, although there had been no distinct illness. About a year before my examination of the patient she noticed some defect of vision when she tried to read, with a sense of strain in the eyes after reading or using them for a few minutes. This was worse by artificial light. Eventually she noticed that she could see better by turning her head to one side or by reading ahead of the place to which she directed her vision. This difficulty had been gradually growing worse in spite of the correction of hypermetropia by suitable glasses.

Examination.—Dr. Wood reported her vision as 24/100 in the left eye and 22/100 in the right eye, but this vision was eccentric in both eyes. Pupillary reaction and the tension were normal. The fundus showed a diffuse, gray-white discoloration of both nerves. The field of vision for white and colors exhibited a well-marked bitemporal hemianopsia (Fig. 3) with some regular limitation of the periphery of the fields of the preserved sides. Examination of nasal cavities and the throat presented nothing abnormal. General physical examination also showed nothing abnormal. An *x*-ray picture was made by Dr. Max Reichmann, who reported an evident enlargement of the sella turcica, with a faint shadow that indicated to him an enlarged hypophysis. Unfortunately, this plate has been lost. The patient presented no evidences that were in the remotest degree suggestive of myxedema or acromegaly. This patient subsequently visited Dr. Pagenstecher at Wiesbaden, at whose instance another *x*-ray picture was made, from which Figure 4 has been prepared. It shows a distinct enlargement of the sella. At the present time the patient considers herself entirely at a standstill and refuses any suggestion of treatment of operation.

Summary.—The patient's menstrual history, double temporal hemianopsia, optic atrophy, and the *x*-ray picture sufficiently establish the diagnosis of pituitary tumor.

CASE 2.—*Patient.*—In April, 1907, I saw in consultation with Dr. J. P. Webster, Master W., a boy of 14, who appeared very small and frail for his years.

History.—On both sides his parents and ancestors were sturdy people. He was born without difficulty after a natural labor. During the first three and a half years of his life he is said to have been a robust and active child. At that time he had a very severe attack of whooping cough, in the paroxysms of which he would frequently have hemorrhages from the nose and mouth. During the course of the whooping cough diabetes supervened, with the urine sometimes amounting to four pints in eight or nine hours, and a corresponding thirst. At one time there was suppression of the urine for sixty hours. As the whooping cough subsided, intense headaches were complained of and were sufficiently severe to apparently stupefy the child. At this time he was submitted to circumcision and nearly lost his life as a result of secondary hemorrhage. As he began to get about, it was noticed that there was some difficulty of sight. The headaches recurred in paroxysms and were attended at times by vomiting. These attacks of headache and vomiting have occurred at intervals of a few weeks or months ever since, frequently terminating in nose bleed with apparent relief. About two years before my first examination in such a severe attack it was noticed that he was partially paralyzed on the right side, especially the right hand. This disappeared in a few days. About that time double optic atrophy was observed, with evidence of what appeared to be former retinal hemorrhages. The deep reflexes were said to have been abolished. Sensory conditions were apparently normal and speech was not affected. There was some transient weakness of the right side of the face. About a year later he had a similar attack, terminating in the same manner, and during the two years before the examination a protracted right sciatica gave him a great deal of suffering and a secondary scoliosis developed. There was also some pain in the sciatic distribution in the left side. His mentality apparently never suffered. Manual dexterity and readiness were extremely good throughout, with the exception of the two attacks in which he lost some control of the right hand. Reflexes were generally very much reduced or abolished. Owing to the defect of vision, his schooling was interrupted and he read with visual difficulty. Repeated examinations of stomach contents and blood have detected nothing abnormal.

Fig. 4.—From radiogram in Case 1, full size, showing enlarged sella turcica, marked +.

Examination.—At the date first mentioned the knee-jerks were present and slightly exaggerated, the left knee-jerk being more active than the right. The heel-jerk was present on the right side; left one could not be elicited. There was no Babinski. Hearing on the right side was reduced for the watch to one inch. On the left side he heard it at four feet. Commonly the patient presented a subnormal temperature, but during paroxysms of headache and vomiting his temperature sometimes reached 99. There was slight ataxia of all extremities but more particularly of the legs. One time he complained of pain located on the left side, back of the ear, in the occipital region, and there was some local tenderness. A competent oculist reported that the patient's left eye was apparently blind, while the vision in the right was 1/6. Pupillary reaction in the right eye was normal, while the left responded only for accommodation. The right field was reported to be decidedly contracted and irregular, and the greatest contraction of the field was on the temporal side (hemianopsia). There was evidence of neuritis, with exudate in both retinæ, the discs showing white atrophy.

In this patient I suspected cerebellar disease, and as the family were going abroad he was referred to Sir Victor Horsley, who kindly wrote as follows, under date of May 7, 1907, and furnished the skiagram from which Figure 5 was made:

"It appeared to me at first examination that the atrophy (optic) was primary and that the pigmentary conditions of the fundus were congenital and possibly specific; if the last, then in the third generation. The only positive signs besides the right hemiparesis were the temporal hemianopsia and the disc change. At the same time I was struck by the patient's attitude, and before making a lumbar puncture sent him to my colleague, Dr. Worrall, for a radiogram of the skull base and spine.

"To our astonishment the photo (Fig. 5) showed very clearly a pituitary tumor at once and that in its periphery were shadows which I recognized must be calcareous plates in the wall of a cyst, as I had met with this before. The lumbar puncture showed a cystic figure even below the normal and inoculation with it so far negative in guinea-pigs.

"The disc condition, the fields and the history were now fully explained. I therefore, after fully consulting with Dr. Webster, decided to tap the cyst, but not attempt its removal in view of the condition of the boy. On raising the temporal lobe by the method I have elsewhere described the cyst was found. I laid the cyst open by a free incision. It contained about an ounce of brown chocolate-like fluid. The cyst was washed out with sublimate and sponged. Explored with a sharp spoon, the calcareous deposit was felt.

"The brain was definitely hydrocephalic. The descending cornu of the (softened) temporal lobe gave way under the retractor and released the intracranial tension notably.

"The wound has healed well and the boy has to-day gone out for a drive (ten days after operation).

"As regards now his future: Of course, hemorrhagic cysts do not tend to fill again. Therefore, the pressure on the tracts ought to be relieved and the boy's sight saved. At the same time this is the first cyst (non-suppurative) that I have done and it is not possible to dogmatize on such a subject.

"If at any time there was evidence of re-established pressure it would be (now) quite possible to pass an aspirator needle with suitable precautions and very little risk into the cyst."

Postoperative History.—The patient made a satisfactory convalescence from the operation and returned to this country, showing a fluctuating state of health. At the site of the operation wound, a pulsating tumor developed, apparently containing cerebrospinal fluid. When this would become tense the boy would become stuporous with intense headache, sometimes with vomiting, and after a few days this condition would

V 53
1909

subside and he would resume his ordinary activities. The family refused to have even a spinal puncture made, which was advised in the hopes of relieving the intracranial tension, and eventually the boy died about eighteen months after the operation. No postmortem examination was allowed.

Summary.—In this case without any evidence of acromegaly but with very decided retardation of the features that mark sexual differentiation, an entire absence of pubic hair and infantile genitals, the eventual diagnosis of the condition turned upon the *x*-ray picture. A brilliant operation, under more favorable circumstances, might have resulted in the complete cure of the patient, with, of course, such visual disability as was dependent on the atrophy. The relation of whooping cough with nasal hemorrhage to the pituitary hemorrhagic cyst is apparently plain when the clinical history is reviewed. The diabetes is also of significant interest.

CASE 3. — *Patient.*— Miss T. was referred to me by Dr. John M. Knott of Sioux City, Iowa, Feb. 25, 1908. She was 25 years of age and presented the appearance of excellent health; was of good color and well nourished, and with no appearance that would suggest any glandular or other difficulty.

History. — She presented nothing abnormal in infancy or childhood. Her first menstruation occurred at 11 years and continued regularly until she was nearly 18 years of age, when at boarding school she became anemic and had iron, etc., with full recovery. At 22 she ceased to menstruate and the flow was never re-established. At the time she ceased flowing her health seemed to be perfect. There were no local conditions that in any way bore on the menstrual function. Two years before the date first mentioned she began to have trouble with her eyes and a specialist in Cincinnati treated her for a year, considering the eye affection to be a nervous derangement attributable to menstrual suppression. In the summer of 1907 vision began to fail again. Dr. Powell of Sioux City then took the eye condition in hand. He wrote, under date of Feb. 26, 1908, as follows:

"Miss T. . . . first consulted me for headaches several years ago. At that time it was decided that she had a moderate amount of regular astigmatism, the correction of which gave her normal vision, and as far as I know the lenses were used off and on, according to the necessities of her work, with considerable, if not complete, relief of all discomfort. But last October she came to me complaining of inability to see well and of diplopia. Examination revealed paralysis of the left external rectus and much deterioration of her sight. It was learned that the muscle became paralyzed in August, 1906, and at that time her vision was normal in both eyes; and later, in February, 1907, it was known that her sight was still normal. This report was made by Dr. Hunt, who examined her eyes in Cincinnati. So between February, 1907, and October of the same year her sight failed very rapidly, more in the right eye, and since that time has been decidedly poorer. The interior of the eye presented no symptoms except vascular changes, the veins being larger than normal. There is considerable change in the fields of vision. We have done everything possible to discover the cause of her trouble and have been unable to do so. Examination of blood, kidneys, etc., is practically negative."

Fig. 5.—From radiogram in Case 2, showing greatly enlarged sella turcica marked + and shadows of a calcareous walled cystic tumor of the pituitary.

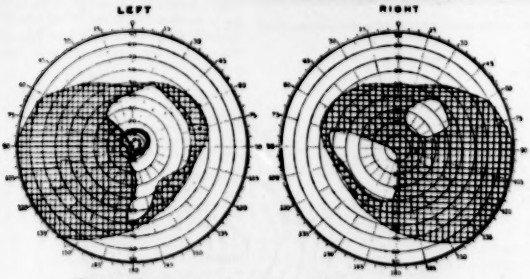

Fig. 6.—Tendency to bitemporal hemianopsia in Case 3.

Under general management by Dr. Knott her blood, which showed a simple anemia, improved and she gained some weight. Potassium iodid was given in large doses, but the vision continued to fail, one eye being much worse than the other. Finally she was submitted for an examination to Dr. Frank Allport of Chicago. This examination resulted in the following report, dated Feb. 29, 1908:

Ocular Examination.—"I find vision in the left eye to be 20/70; vision right eye 2/200. I send you a copy of her field of vision chart (Fig. 6). Please note the peculiar visual islands on the right side, and the substantial contraction of the left side. Notwithstanding these well-marked visual field changes, I would be unable to state that either of her optic nerves presented an abnormal appearance; they are possibly a little whitened and the edges, especially on the right side, are possibly a little hazy, but if I should see these nerves without any knowledge of the case I should call them normal-looking nerve-heads. Dr. Woodruff has examined her with me, and we both feel the same way about it. Dr. Guilford is also of the same opinion. This is a most interesting case and I shall be obliged if you will let me know the outcome. In view of the healthy appearance of her nerve-heads I should have great

hopes of restoration of vision, provided the growths which are producing the pressure are removed."

The fields of vision are suggestive of a bitemporal hemianopsia, and an *x*-ray picture was made by Dr. Reichmann which shows (Fig. 7) a tremendous excavation of the sella turcica so that it appears large enough to contain a good-sized English walnut.

Operation.—The patient was referred to Dr. L. L. McArthur for an operation for the removal of a pituitary tumor. This operation was done March 5, 1908. The skull was opened on the right side in order to avoid the left side cortex for speech. The opening was made well forward in the frontal region, the line of incision commencing at the external orbital process and extending upward and backward semicircularly and terminating above the right ear. Considerable intracranial pressure was found, though I have frequently seen much greater evidence of intracranial pressure. When the dura was incised, the brain presented nothing abnormal, but proved to be very friable. Great difficulty was encountered in reaching the tumor. In the attempts to raise the frontal lobe for the purpose of following along the wing of the sphenoid to the sella, considerable laceration resulted to the brain tissue. The operator eventually reached the pituitary tumor, which he found to be bean-shaped in outline, lying transversely in the sella, and feeling to be 1¾ inches in length and 1 inch in thickness. After about two-thirds of this growth was enucleated, it broke down, giving issue to a considerable amount of fluid contents which escaped with the blood and cerebrospinal fluid and could not be preserved. Apparently the tumor was cystic and was suspected to be a cystic adenoma. The patient's condition was unsatisfactory and the operation was terminated.

Fig. 7.—From radiogram in Case 3, showing great enlargement of the sella turcica marked +, full size.

She seemed to be rallying nicely from the operation and anesthetic, but at 12 o'clock that night suddenly collapsed and died. No postmortem investigation was permitted.

Summary.—In this case the cessation of menstruation, significant visual fields pointing to bitemporal involvement, and the *x*-ray picture made the diagnosis an easy one. Great excavation of the sella, as shown by the *x*-ray picture, indicated that the tumor could have been easily approached through the nasal spaces and probably could have been evacuated with little difficulty and its wall perhaps scraped out with more or less completeness. Probably this is the first case in which a tumor of the pituitary was diagnosed and operation for its specific removal done in this country.

CASE 4.—*Patient.*—A. M., 36 years of age, tinsmith by trade, married, with a number of healthy children, was referred to me Oct. 17, 1908, by Dr. Frank Allport, who made the statement that the "vision of the left eye was entirely lost, vision of the right eye reduced to 24/40, and not benefited by lenses. The left optic disc entirely atrophied, right optic disc white. Vision was considered normal until five months ago, when he noticed that the sight of his left eye was gradually failing, until at the end of three months it was entirely lost. In the beginning he had intense left-sided headaches every day; during the past two months headaches have been less. His field of vision (as shown in Fig. 8) shows a sharply defined temporal hemianopsia of the right eye."

General Examination.—Aside from the conditions in the eyes nothing abnormal was detected. The patient, however, stated that he had been impotent for about a year. An *x*-ray picture (see Fig. 9) clearly demonstrated an enlargement of the sella turcica. Operation was advised and arrangement had been made for it at Michael Reese Hospital, when the patient was dissuaded by one of our local ophthalmologists. The patient's wife having lived in Vienna, he finally reached the clinic of Professor Fuchs, where the condition was recognized. Dr. E. V. L. Brown of this city happened to be present in that clinic at the time and first called my attention to the facts. The diagnosis of pituitary tumor having been confirmed, he was referred to von Eiselsberg for an operation.

Operation.—This was done Jan. 16, 1909, and, as reported by von Eiselsberg[1] in the *Wiener klinische Wochenschrift*, and confirmed to me by personal communication, was the most difficult of the five that he had operated by the nasal route up to that time. A true hypophysis tumor was lacking. He says: "Finally, however, the hypophysis was uncovered and found to be changed into a large tumorous mass which was practically all removed. The pathologic examination showed it to be a malignant epithelial neoplasm. The postoperative course was not disturbed during the first days except by a moderate increase in temperature, and the outer wound healed by first intention. The patient, however, caused great anxiety by a pronounced stupor; the development of brain abscess was feared. This, however, subsided, and the patient recovered."

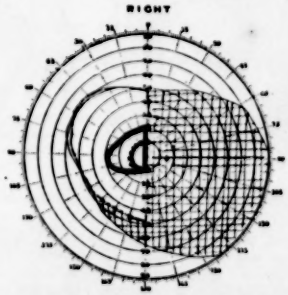

Fig. 8.—Temporal hemianopsia in Case 4.

At the time of the last report he appeared brighter and considered himself normal. Headaches had ceased and he thought his vision was better, but this could not be proved objectively.

CASE 5.—*Patient.*—L. B., schoolboy, aged 14, was referred to me Feb. 26, 1900, by Dr. H. B. Favill.

V 53
1909

History.—His family history presented nothing notable. This boy was one of five healthy children. He had presented no serious illness, but had trouble with bed-wetting and pavor nocturnus in his younger years. Two years before, Dr. M. R. Brown had removed a nasal septal spur and some large polyps which occluded the nasopharyngeal passages. At the present time the nasopharynx is practically negative. For a year the patient has noticed difficulty in seeing; could not clearly see the clock-face across the room or follow the flight of the golf-ball. In October last he complained of foggy vision and consulted Dr. William H. Wilder, who gave me the following report:

Ocular Examination.—"Aug. 4, 1900, he was seen by Dr. Allport, who made an examination of the eyes and corrected the refractive error that exists, represented by the lenses he is now wearing. I have Dr. Allport's history of the case; he states that when he first saw the patient last August the vision of each eye was 20/20. Oct. 22, 1900, he again visited Dr. Allport, complaining of temporal headaches and of impairment of his sight. He again examined the vision and found, with the correcting lenses, that it was 20/20, although the boy tells me that at the time the vision was foggy. I first saw him Dec 15, 1900, and my notes show that R. V. equal 20/80; with the lens similar to the one he is now wearing, it was improved to 20/40. His L. V. was 2/200; with the lens similar to the one he is now wearing it was not improved at all. L. stated to me at his first visit that the sight of the left eye became rather suddenly dim about two months before, or October 15. You will observe that I took a charted field of the right eye, December 18 (Fig. 10) and at that time there was no hemianopsia, but later this condition developed, as shown in the field taken Jan. 14, 1901 (Fig. 11), and it continues up to the present time. The retina of the right eye becomes easily fatigued. The vision of the right eye fell rather suddenly, and on December 18 it was reduced to 20/60. On January 26 it was reduced to 20/100. On February 6 to 20/200. On February 20 I found the vision slightly improving, being represented by 20/80, while to-day it is 20/100. This, of course, means with appropriate correction. It has never been possible to take a satisfactory field of the left eye. When I first saw him there was only one small sector upward and inward where he could perceive even hand movements, and yet he was able to see about 2/200. At no time has he had any evidence of optic neuritis; nor do I call the very slight pallor of the left optic disc abnormal. It seems to me to be due more to the physiologic excavation which there exists. At no time have I been able to demonstrate local anesthesia of the cornea or the lids, monocular diplopia or micropsia. The boy's physical condition is excellent, and for the last ten days he has had no headache with the exception of one. He has had at times dull headaches through the temples. The tests for simulation or malingering with the Snellin colored letters have been constantly negative."

General Examination.—The boy presented a very excellent physical condition, being up to his years in all respects. There was some vasomotor disturbance of the skin and tendency to factitious urticaria. In all other respects he seemed normal.

Fig. 9.—From radiogram in Case 4, showing some enlargement of the sella turcica marked +.

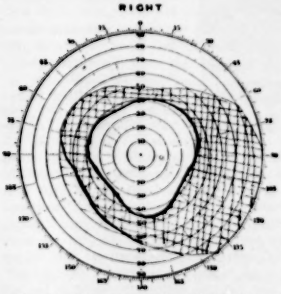

Fig. 10.—Contracted field early in Case 5, Dec. 15, 1900.

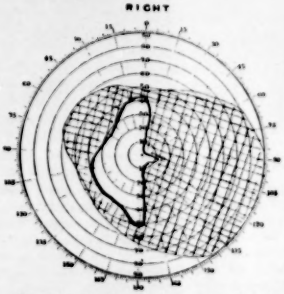

Fig. 11.—Hemianopsia in Case 5, Jan. 14, 1901.

A diagnosis of probable pituitary tumor was expressed, but no *x*-ray picture was made, as at this remote time its relation to the condition was not appreciated. In the following January, Dr. Wilder made the following report in regard to the patient's eyes:

"After you saw L. B, since Feb. 28, 1901, his vision fell rapidly. I was able, also, to demonstrate the Wernicke hemiopic pupil on March 6, 1901, and on that day his R. V. was 20/100 and his L. V. fingers at eight feet. He was given large doses of potassium iodid by Dr. Favill with apparently no result. Not until early in April did I feel positive that there was atrophy of the optic disc, and then it developed rapidly. He did not suffer from headache or pain, but after that date his vision became rapidly less. There seemed to be no question that our suspicions as to the trouble being a chiasm lesion were well founded. Early in May they visited New York and consulted Dr. Knapp, from whom I received a letter May 9, in which he stated that there was in all probability a growth pressing on the chiasm, probably originating in the hypophysis. Knapp inclined to the belief that this growth was a sarcoma, and he says he would advise an attempt at its removal were it

not that the majority of such cases are sarcomatous. Fenger also saw the case, but no operative attempt was ever made. The constitutional treatment with mercury and potassium iodid seemed to accomplish nothing and he has gone on to complete blindness. I think no other symptoms have developed, although I have not seen the boy in months, but I have seen his brother within the last few weeks, and he informed me that L. was quite well, did not suffer at all, was bright and cheerful, and mentally apparently all right, but was totally blind."

Later History.—From this time on until the boy's death, which occurred about a year ago, he remained practically unchanged, with the exception that convulsions developed which would occur at varying intervals, of a generalized and severe character. Also at times there was decided headache and some vomiting perhaps of a cerebral character. His mental qualities were unaffected except in so far as his blindness cut him off from educational opportunities. Physically, while he grew reasonably tall, he remained infantile in conformation and the genitals never developed, nor as far as could be learned was there any establishment of the usual genesic tendencies. The beard and pubic hair never grew. His death occurred at a small place in the south, rendering a postmortem investigation impossible.

Summary.—The history of this case, the hemianopsia, the atrophy of the optic nerves, the failure of the development of the genitals, beard, etc., combined with diffuse symptoms of brain tumor, make it quite evident that there was a pituitary growth, and that operation undertaken at an early date might have saved both vision and life.

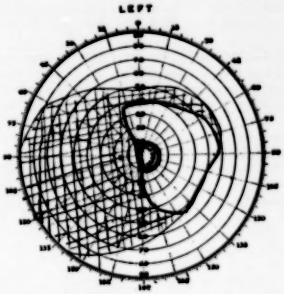

Fig. 12.—Fields of vision in Case 6.

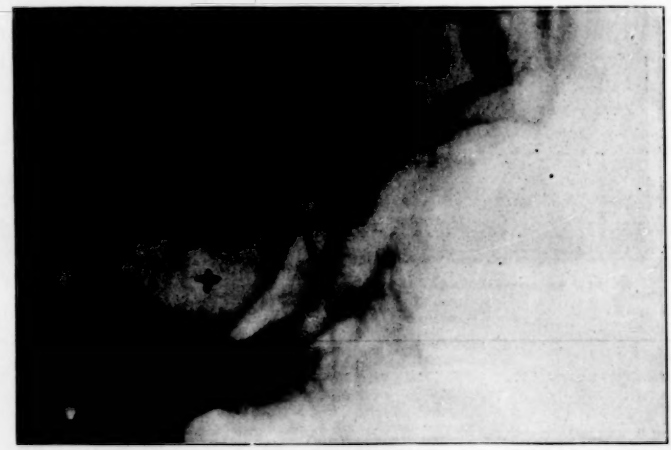

Fig. 13.—Radiogram in Case 6, showing excavation of sella turcica marked +, full size.

CASE 6.—*Patient.*—W. R. H., aged 33, father of three children, of good family and one of six brothers and sisters all in good health, came to Chicago to consult Dr. Casey A. Wood regarding progressive blindness. By him he was referred to Dr. Arthur R. Elliott, who kindly allowed me to see him incidentally, and both these men have furnished me with their notes in the case. Aside from grip in 1890 and frequent sore throats and long standing nasal catarrh, the patient personally presented nothing of medical significance. His occupation had been an active outdoor one and his habits good.

History.—Beginning about six years before time of examination the patient noticed failure of vision in the right eye. This at first was confined to the outer half of the visual field, but subsequently the inner portion also failed, and at present he is totally blind in that eye. One year before I saw him the left eye became similarly involved, the progression of sight disturbance being the same. At the time of examination the outer half of the left visual field is blind. Of recent months he had had a good many darting pains back of the right eye and had had toothache, for which several teeth have been extracted without material relief.

General Examination.—The patient showed a ruddy, clear complexion and a general appearance of good health. Aside from some irritation in his gums and offensive breath, the physical examination was practically negative. There was no infection of the nasal passage or sinuses. His muscle reflexes were all exaggerated, perhaps because of a course of strychnin in large doses. There was no incoordination or pupillary disturbance. Pulse, chest organs and abdominal organs were normal; genitals normal. His sexual power was only moderate and his physical strength was much less than one would expect in an individual of his proportions, and was less than it used to be.

Ocular Examination.—Dr. Wood reports as follows: "His ocular history shows that with the exception of wearing glasses during the past six years for improvement of his near vision, he did not notice any difficulty about seeing until six years ago. At that time vision in his right eye began to fail and in a year or so he was unable to read ordinary print. The record of Dr. Goode shows that in the early stages of visual failure he had V. L. = 20/15 and V. R. = 20/30. He was conscious of the failure in sight occurring in the temporal field of the right eye until a year ago, when it was reduced to light perception. Within the past year he noticed the sight in his left eye failing—to the temporal side of the meridian line—just as in the case of the right eye. This obscuration of vision took the shape of a dark spot which grew larger and larger until one-half of the field was cut off. For more than a year he has had shooting pains in the temples, as well as in the right eye, extending to the center of the head. The tension of both eyes is normal and the pupillary reactions of the left eye are active. There is no perception of light in the right eye, but the left has 20/15, and J. 1, with a fair accommodation range. Wern-

V 53
1909

icke test not applicable. The fundus examination shows well-marked gray atrophy *right*, with an atrophic scleral ring, vessels of fair size and chorioidal disturbances. The papilla, *left*, is slightly pale but otherwise the papillary area with its vessels is normal. Small, round, whitish chorioidal exudates are sparsely scattered throughout the fundus. The perimeter (Fig. 12) shows in the left eye a well-marked hemiopia."

General Examination.—In my personal examination of the patient nothing further was found except that I was struck with the sausage-shaped fingers which conveyed a feeling of cutaneous resiliency or elasticity such as I have frequently noted in acromegaly. The proportions, however, were not particularly enlarged according to the patient's statement. An *x*-ray picture (Fig. 13) shows unquestioned enlargement of the sella turcica, which, as is shown in this case, is usually at the expense of the sphenoidal sinus; that is to say, the tendency of the tumor is to advance toward the nasal spaces.

The patient returned to his home in the northwest with the understanding that any further encroachment on the visual field of the left eye would be the signal for an operation.

To these six cases a number could be added in which acromegaly was present. That condition, however, is so self-evident that it is needless to detail instances in this connection. It is much more important that the surgeon, the ophthalmologist and the neurologist should recognize that a pituitary tumor may be present without the association of acromegaly. It is evident from the experience already obtained by the various operators and observers that the removal of the pituitary gland is indicated in both groups of cases. In the first place it furnishes the only possibility of the prevention of blindness, and in the second case seems to hold out some hope of a curative effect for the acromegaly, and in all instances promises the prolongation of life. It is not unlikely that the operation will be fraught with good results in proportion as it is undertaken early.

2 Adams Street.

FOOD INTOXICATIONS IN CHILDHOOD*

JOHN RUHRAH, M.D.

BALTIMORE

Much has been written and said about food fevers, autointoxications and similar conditions, but little has been done concerning this class of cases, which, it would seem, ought to be established with comparative definiteness both from the standpoint of diagnosis and treatment; and as a result the patients, both large and small, frequently suffer in the hands of those who do not know what to do for them, or are buffeted about from specialist to specialist for eyes, ears, stomach, or what not. Many a practitioner has been satisfied with telling his patient or his patient's parents that there is some obscure disturbance of metabolism and prescribing various more or less inexact methods of treatment, feeling that because he is unskilled in the chemistry of nutritional disorders he can neither diagnose nor treat them. While one realizes the necessity for the investigation and careful and exact study of the conditions under consideration, there is no reason why, in the absence of such knowledge, the patient should be left to suffer.

A large proportion of the conditions which the pediatrician is called on to treat are due directly or indirectly to errors in diet. Leaving out of consideration a large number of cases in which the trouble is an acute or chronic gastric or intestinal disturbance, there are still a large number in which the mere overfeeding in some direction causes symptoms. These untoward symptoms may be caused by too much food of all kinds and too little exercise, or by too much fat, protein or carbohydrate, or too much of any combination of these. The symptoms referred to are easily produced in otherwise normal children. There are still other children in whom the maximum limit of fat, protein or carbohydrate consumption is abnormally low, so that what appears to be a more or less correct diet may in any particular child be an unsuitable one, and result in symptoms often not even suggestive of errors in diet. It is well to remember that, on the other hand, disease of some organ may reflexly upset the digestion or metabolism and often unsuccessful attempts are made by regulating the diet to relieve symptoms caused by eyestrain or some other condition.

It is not possible to separate a symptom-complex out of each one of these conditions, although some light has been thrown in this direction, and it is to be hoped that with further study more may come. In other words, the symptoms produced by too much food of all kinds may resemble excessive fat-feeding, or too much protein may cause a condition similar to too much carbohydrate and *vice versa*, so that at times a certain amount of experimenting must be done to determine the proper course of treatment. The symptoms that may be produced are too varied to permit of lengthy description at this time. The most suggestive thing is a train of symptoms recurring periodically; it matters not what combination these may present. The next step in the diagnosis is by careful physical examination to exclude any disease of any organ and, this having been done with greater or less accuracy, a study of the child's habits and food must be undertaken. In over half the cases the error is usually evident; in others it requires careful investigation and often trial diets. These cases require individualizing more than any other class, but the results are often so brilliant as to reward one for the time and trouble taken.

As previously noted, while one can not make symptom-complexes, the following points have been found of use:

Taking of too much food of all kinds usually causes such attacks as are described by the laity as biliousness. The attacks recur with greater or less frequency, and are characterized by fever, a coated tongue, foul breath, headache, malaise, often drowsiness; there is often vomiting or diarrhea or both, and the liver may be somewhat enlarged and tender. A brisk purge and limitation of the diet usually are all that is needed.

Too much protein causes, as a rule, much the same symptoms. Sometimes some one symptom is especially prominent, as recurring headache, or recurring neuralgia, or attacks of vomiting, or in milder cases periods when the tongue is furred and breath foul without much other disturbance.

Too much fat is a frequent cause of trouble, and many children are often intentionally overfed with fat. These are cases of malnutrition in which large quantities of butter, cream, cod-liver oil, and other fats are given with the idea of fattening the child and restoring its normal condition. The result is that the nutrition is not improved, but is usually made worse. The child is unwell, has a pale, muddy skin and large dark circles under the eyes; one of the most striking features is a coated tongue and exceedingly fetid breath. There is gastric disturbance, and vomiting is frequent and there is often diarrhea with the passage of undigested fat in the stools.

* Read in the Section on Diseases of Children of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

The carbohydrate cases are the commonest of all, owing to the fact that a great many children are given large quantities of starches and sugars, not only at their meals, but between meals in the shape of sweets of various kinds, often of the cheaper varieties of candies. Many children have a very low capacity for utilizing sugar, and some for both sugar and starches. As in the other forms the periodicity of the attacks is the most striking feature. Perhaps the commonest form of the attack is recurrent vomiting, although this may be seen in cases in which protein metabolism is at fault. In some instances the attack consists merely of fever, or a sick headache, while in other cases there are attacks of asthma which sometimes follow indiscretions in diet. The most difficult cases to manage are those in which there is a combination, an inability to utilize normal quantities of protein and carbohydrate, as it is difficult to arrange the diet satisfactorily. The results in preventing the attacks are remarkable if the cooperation of the family can be secured. Having found out the food factor at fault, an effort should be made to determine about what quantity of that particular food can be utilized, then to keep the child on a diet well within the limits of its powers of assimilation. In addition to this it is exceedingly important to see that the bowels are regular, and a rather good plan is to use some fairly active purge at least once a week. Outdoor life and plenty of exercise is exceedingly important and many patients are greatly benefited by a sojourn in the country, not at a summer resort, but on a farm where a very active outdoor life may be led without too much restriction in the matter of observing social forms.

The following cases illustrate what may be done in the different classes of cases:

OVERFEEDING WITH PROTEINS

As an example of protein poisoning the instance of a small child 2½ years of age may be cited; an only child and one very badly brought up, who had an idea in its head that it would eat nothing except meat, or very little else. The child was having periodic attacks of an illness consisting chiefly of fever and prostration, the attacks being rather promptly relieved by the administration of calomel. In addition the child was having repeated seizures, almost epileptic in character, which would come on if the child became angry, or sometimes without any warning whatever. The child was put first on a milk diet and from that on an ordinary normal diet, making a complete recovery and has remained well ever since.

OVERFEEDING WITH FATS

An example of the cases of overfeeding with fats is shown in the case of a boy 6 years old who was very much undersized and under the normal weight, who had never been robust since an attack of ileocolitis in infancy. His mother, being anxious to make him a large, strong boy, under the advice of her physicians, gave him large quantities of cream, yolk of egg, cod-liver oil, and overfed him in other directions as well. The result was considerable gastric and intestinal disturbance, and a typical picture as described above from overfeeding with fat. The attacks of this character had been recurring for years. The diet of the boy was entirely readjusted, he was taken out of doors, and made a very good recovery. He gained in weight and strength, and the periodic attacks ceased altogether with the change in diet.

OVERFEEDING WITH CARBOHYDRATE

The carbohydrate cases present many different features. The following illustrate some of these points:

Recurrent Vomiting.—A boy aged 5 had been having attacks of vomiting, for several years, lasting four or five days at irregular intervals varying from a few days to a few weeks. These attacks began after an attack of some sort of a diarrhea when he was a small infant. Numerous physicians were consulted and the diagnosis of gastric disturbance was made in every instance, and the boy's diet arranged with that disease in view. He was finally taken to New York, where the diagnosis was confirmed, and finally on his way through Baltimore to his home in the south he was taken with a severe attack. The mother decided not to consult any physician, but, the boy's condition becoming alarming, she feared that the attack would prove fatal and sought aid. The diagnosis of cyclic vomiting was made; the boy was put on a diet without sugar and one containing comparatively little starch, and in the past three years he has improved in every way. He has had only one or two attacks of vomiting and these followed overindulgence in sweets.

Recurrent Fever with Diarrhea.—A small girl, aged 3, who was given excessive quantities of starchy foods and candies, was having attacks of fever with diarrhea coming on every other day. The diagnosis of malaria had been made, but there were no parasites in the blood and quinin had no effect. The case was seen in consultation and the suggestion made to cut out the sugars and limit the starchy foods. The child made a rapid recovery, and has had practically no recurrences of the trouble except on overindulgence in sugars.

Asthma.—The first case was one of an infant who had severe eczema and also frequent attacks of asthma. The child had a severe intestinal disorder, and was living on cereal gruels and fruit. The child refused to take milk or milk mixtures, and finally after considerable difficulty he was put back on a normal diet with the result that the eczema became very much better, but the asthma persisted. The amount of sugar and starch in the diet was limited, and under this diet, as long as the child was out of doors and getting plenty of exercise, he remained free from asthmatic attacks.

A second case is more striking. A girl of 13 was having recurrent attacks of asthma for which she had been treated in many different ways, having had her tonsils removed and her nose operated on without any result. The attacks were more or less periodic, and during them the urine contained acetone and diacetic acid. A trial was made of cutting out the sugars and limiting the starchy foods, with the result that the child has only had two attacks in the past year, both of these following overindulgence in sweets at a children's party.

Recurrent Fever.—A boy of 8 was having recurrent attacks of fever so that he was ill about one-third of the time. The urine contained no diacetic acid during these attacks, and beyond the symptoms caused by the fever nothing could be discovered. With the same dietary precautions and free purgation once a week the boy has been entirely free of these attacks with exception of one shortly after the treatment was instituted.

839 North Eutaw Street.

Saline Transfusion to Arrest Hemorrhage.—The coagulating power of the blood is said to increase materially after injection of 5 or 10 c.c. of a 3 or 5 per cent. solution of salt. Van den Velden has announced the hemostatic value of small amounts of a hypertonic saline fluid, and their harmlessness.

V 53
1909

THE TREATMENT OF ANEMIA IN INFANCY WITH CITRATE OF IRON ADMINISTERED SUBCUTANEOUSLY *

JOHN LOVETT MORSE, A.M., M.D.

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BOSTON

The percentage of hemoglobin in infancy gradually rises from 55 per cent. to 60 per cent. at the end of the first month to 70 per cent. at six months, where it remains during the rest of infancy. The number of red corpuscles in infancy varies between 5,500,000 and 6,000,000. Compared with the adult, therefore, in the infant the hemoglobin is relatively low. This comparative deficiency in hemoglobin is presumably due to the fact that the infant normally receives an insufficient supply of iron in its food and that the reserve of iron present in the liver at birth is not large enough to keep the percentage of hemoglobin at the adult standard. This reserve of iron may, moreover, be insufficient and in any event is comparatively easily exhausted.

It is probable that the disease chlorosis never occurs in infancy. The chlorotic type of blood is very common, however, in the anemias of this age. The explanation of the occurrence of this type of blood is that, since the percentage of hemoglobin is normally relatively low in infancy and the number of red corpuscles larger at this age than later, a diminution in both gives a combination like that found in chlorosis in later life. Moreover, owing to the comparatively small reserve of iron at birth, almost all anemias in infancy have a relatively low percentage of hemoglobin. It is not uncommon to see the chlorotic type of blood develop in the course of any of the anemias of infancy and disappear later. In fact, this type of blood is almost always present to a greater or less degree at some time in the course of every anemia in infancy.

Iron is especially indicated, therefore, in the anemias of infancy. This is doubly true because milk, which makes up so large a part of the food at this age, contains a relatively small amount of iron. It is rather difficult to get infants to take sufficient amounts of iron by the mouth. Iron by the mouth is also very likely to disturb the digestion. In severe cases, therefore, it is often very advantageous to give iron in some other way. Iron may be given to infants subcutaneously without injury. A very serviceable form of iron for subcutaneous use is the aqueous solution of the citrate. This can be put up in pearls and sterilized, each pearl containing a single dose. When prepared in this way it remains sterile indefinitely. This solution is absolutely non-irritating and is never followed by induration or abscess if the injection is properly given. The injection is, however, sometimes followed by pain lasting from a few minutes to an hour. A glass syringe with asbestos packing, which can be sterilized, is necessary. The needle must be of platinum, as the solution corrodes the ordinary steel needle. The average dose during infancy is ¾ of a grain every other day.

I have used the citrate of iron in this way in a number of cases—some of the chlorotic type, some mild cases not of this type, and some cases of severe anemia with splenic tumor—with, on the whole, pretty satisfactory results, even in the severe cases. In the milder cases the improvement during treatment has been very rapid. In most cases the rise in the percentage of hemoglobin has been more rapid than that in the number of red corpuscles. In fact, in some cases, the red cells have diminished in number while the hemoglobin has continued to rise.

The following cases are examples:

CASE 1.—*Patient.*—Lawrence H., 14 months old, was seen June 20. He was born at seven months, weighing but 4½ pounds. He had done very well on the whole, but during the last six weeks had refused everything but milk and had lost a great deal of color.

Examination.—He was well developed and nourished, weighing 16 pounds. There was marked pallor. The liver was palpable 2 cm. below the costal border. The spleen was not palpable. The cervical lymph nodes were palpable, the others were not. The general examination was otherwise negative.

Blood: Hemoglobin, 30 per cent.
Red corpuscles, 2,500,000.
White corpuscles, 16,700.
Mononuclears, 76 per cent.
Polynuclear neutrophiles, 22 per cent.
Eosinophiles, 1 per cent.
Mast cells, 1 per cent.

There was moderate variation in the size and shape of the red corpuscles with some achromia. Three normoblasts were seen in counting 200 white cells.

Course of Disease Under Treatment.—Citrate of iron, gr. ¾ subcutaneously, every other day, was begun. Improvement began after the first injection of iron. The child ate better and began to improve in color. The examination of the blood July 16 after twelve injections of iron was:

Hemoglobin, 50 per cent.
Red corpuscles, 4,200,000.

This case belongs in the class of secondary anemias due to too long continuance of milk without other food. There is a slight, but only a slight, tendency to the chlorotic type.

CASE 2.—*Patient.*—Alma H., 7 months old, was seen April 11. She had had practically nothing but the breast. According to the story, anemia developed rapidly following the painting of the house about ten days before. There were no other symptoms, besides a somewhat apathetic condition, pallor and poor circulation.

Examination.—She was well developed and nourished. There was a very marked yellowish pallor. There was a slight venous hum in the neck and a slight systolic murmur at the base of the heart. The liver was palpable 3 cm. below the costal border; the spleen was not palpable. There was no enlargement of the peripheral lymph nodes. There was slight puffiness of the feet and a little about the eyes.

Blood: Hemoglobin, 20 per cent.
Red corpuscles, 1,490,000.
White corsupscles, 11,000.
Mononuclear, 85 per cent.
Polynuclear, 15 per cent.

There were many large forms of red cells, moderate polychromatophilia, slight poikilocytosis and an increased number of blood plates. Some of the mononuclear cells looked like those from the bone marrow and were throwing off blood plates. Three normoblasts and one eosinophile were seen on a slide.

Course of Disease Under Treatment.—The baby was started on tartrate of iron and potash, by mouth, 4 grains, three times daily. There was no improvement on this treatment. Citrate of iron, gr. ¾ subcutaneously, was begun May 11 and was given about every third day until July 27. The hemoglobin June 8 was 60 per cent.; July 4, 80 per cent.; July 29, 80 per cent., and September 1, 100 per cent. The red corpuscles were unfortunately not counted. Examination of stained specimens July 8 showed, however, that the red cells were normal in size, shape and staining qualities. One normoblast was seen on a slide. The blood plates were normal, the leucocytes estimated at about 10,000. Improvement in the color of the skin and general appearance was almost immediate after beginning the citrate of iron, and continued steadily.

CASE 3.—(No. 2204.)—Male, 1 year old, entered the hospital Dec. 12, 1904.

* Read in the Section on Diseases of Children of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

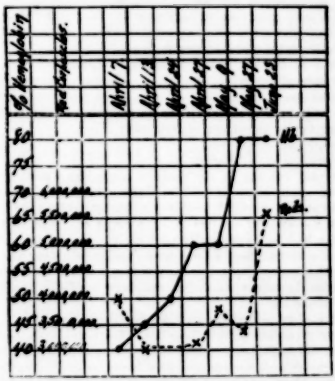
Examination.—He was emaciated and pale. The spleen was palpable 4 cm. and the liver 4 cm. below the costal border. The urine was negative. The blood showed:

Hemoglobin, 35 per cent.
Red corpuscles, 3,416,000.
White corpuscles, 24,800.

While in the hospital he had otitis media and an abscess of the neck. During this time he had had no iron. The abscess of the neck was healed February 1. The skin then showed a marked yellow pallor. The liver and spleen were each palpable 2 cm. below the costal border. The cervical and axillary lymph nodes were slightly increased in size.

February 6. Blood: Hemoglobin, 20 per cent.
Red corpuscles, 2,083,000.
White corpuscles, 23,000.
Mononuclears, 55 per cent.
Polynuclear neutrophiles, 43 per cent.
Eosinophiles, 0.5 per cent.
Myelocytes, 1 per cent.
Basophiles, 0.5 per cent.

There was slight variation in the size and shape of the red corpuscles as well as slight polychromatophilia. One megaloblast was seen in counting 500 white cells.



Percentage of hemoglobin and number of red corpuscles in Case 5.

Course of Disease Under Treatment.—On February 8 citrate of iron, gr. ¾, subcutaneously, every other day was begun.

February 23. Blood: Hemoglobin 65 per cent.
Red corpuscles, 2,408,000.
White corpuscles, 13,000.

The general condition improved decidedly during this period. It is noticeable how much the hemoglobin improved, although the red corpuscles diminished in number.

The anemia in this case was distinctly of the chlorotic type.

CASE 4.—(No. 2363.)—*Patient.*—Male, 20 months old, entered the hospital May 3, 1905. He had been very badly fed, but his digestion had been fair. Enlargement of the abdomen had been noticed for four months.

Examination.—He was small and poorly nourished. There was moderate pallor and signs of marked rickets. The liver was palpable 4 cm. below the costal border. The spleen was palpable, running out from under the ribs in the left nipple line, downward just outside the navel, then below the navel to the anterior superior spine and backward into the flank. The surface was not quite smooth; the edge was sharp. There was slight enlargement of the cervical and inguinal lymph nodes.

Course of Disease Under Treatment.—On May 4 citrate of iron, ¾ gr., subcutaneously, every other day, was begun.

May 5. Blood: Hemoglobin, 50 per cent.
Red corpuscles, 4,000,000.
White corpuscles, 15,000.
Mononuclears, 38 per cent.
Polynuclear neutrophiles, 59.5 per cent.
Eosinophiles, 0.5 per cent.
Myelocytes, 1.5 per cent.
Mast cells, 0.5 per cent.

There was slight variation in the size and shape of the red corpuscles and considerable polychromatophilia. Two normoblasts and 8 megaloblasts were seen in counting 200 white cells.

May 20. Blood: Hemoglobin, 75 per cent.
Red corpuscles, 4,800,000.

During this time he had had a slightly elevated temperature. The digestion was fair at first, later good. He was taken from the hospital by his parents May 21, not relieved.

In this case, also, the improvement in the percentage of the hemoglobin was much greater than in the number of red corpuscles.

CASE 5.—(No. 2869.)—*Patient.*—Female, 1 year old, was admitted to the hospital April 4, 1907. No history was obtained.

Examination.—She was small and poorly nourished. There was moderate pallor and marked signs of rickets. There was a venous hum in the neck and a systolic murmur at the base of the heart. The liver was palpable 2 cm. below the costal border. The spleen was palpable, running out from below the ribs in the left anterior axillary line, downward to the navel, backward to the anterior superior spine, then along the crest of the ileum and disappearing in the back in the scapular line. The surface was smooth, the edge rounded, the notch distinct. The cervical and inguinal lymph nodes were the size of peas.

Course of Disease Under Treatment.—April 5 citrate of iron, gr. ¾, subcutaneously, every other day, was begun.

April 7. Blood: Hemoglobin, 40 per cent.
Red corpuscles, 4,054,000.
White corpuscles, 13,000.

The improvement in the blood is evident from the chart.

June 23. Blood: Hemoglobin, 80 per cent.
Red corpuscles, 5,600,000.
White corpuscles, 22,000.

During her stay in the hospital the morphology of the blood improved as materially as did the hemoglobin and number of red corpuscles. The general condition also improved decidedly. She was discharged relieved June 28. In this case the gain in the hemoglobin was steady, while the number of red corpuscles diminished for a time, but later improved rapidly.

My experience leads me to believe, therefore, that the subcutaneous use of iron in the way just detailed is often most advantageous. The results are more marked and are obtained more rapidly than when the iron is given by mouth and there is much less danger of disturbing the digestion. The subcutaneous use of iron is especially indicated in the severe cases of secondary anemia with disturbance of digestion and in those of the chlorotic type.

70 Bay State Road.

AMETHYST-TINTED LENSES*

A PRELIMINARY COMMUNICATION*

L. WEBSTER FOX, M.D., LL.D.
PHILADELPHIA

While man has always instinctively protected his eyes from the harmful influences of light, no reliable historical data are available to demonstrate the evolution of the use of colored glasses. Like many other customs originally based on empiricism, the subject is inextricably blended with the mists of antiquity. Ever since ophthalmology has become an integral part of medical science, ophthalmic surgeons have been confronted with the problem as to what color is best incorporated with glasses for the purpose of protecting the

* Read in the Section on Ophthalmology of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

V 53
1909

eyes against the various harmful influences attributed to light, quantitatively as well as qualitatively. Up to a comparatively recent time the injurious effects were supposed to be due to excessive luminosity, but we know that the ultraviolet rays are chiefly responsible. The problem is not only of importance from a scientific standpoint, but is assuming economic proportions of no small degree, when we consider the number of cases and the virulence of the symptoms that go hand in hand with the increasing employment of artificial sources of illumination.

A century ago green glasses were worn. Later these were superseded by blue glasses of the same tint as the sky. As these were easy to manufacture in all dark gradations of color and comparatively inexpensive, they became popular with the laity, but otherwise acquired very little status. Glasses of neutral tint or smoke-color have afforded considerable relief, although the glasses were sometimes made so dark in color as to impede decidedly the power of vision.

In 1887 Fieuzal,[1] after numerous investigations, introduced a combination of gray, yellow and green, which still bear his name under the term "Fieuzal glass." This glass was so colored, as the result of the investigations of Van Genderen Stort,[2] who showed experimentally that the pigment, as well as the movement of the retinal elements, were reduced to a minimum under the influence of yellow light. The glass was not intended to arrest the ultraviolet rays, as their harmful effect upon the eye was not yet known at that time. While these glasses have been found acceptable and soothing, they afford no protection against artificial sources of illumination, which are rich in ultraviolet rays, as for instance, the electric arc lamp. Various other tints have been introduced from time to time, many of which, although withstanding spectroscopic and other tests, have failed on practical application.

In 1887 I was first led to use the amethyst-tinted glasses on noting that dentists, by constant use of their eyes in filling teeth with gold, became gold blind, failing to differentiate the walls of the tooth and the gold, and could continue their work only after a certain period of rest. It occurred to me that the yellow of the gold was producing over-stimulation of the retina and that a possible remedy would be the amethyst-tinted glass found in some of the old Philadelphia windows. Some of this glass was procured and I had a pair of spectacles made for a dentist patient which promptly relieved him and enabled him to pursue his work continously for days without intermission. This good effect was confirmed in many other cases, and I next began to investigate the phenomenon of the coloration.

THE COLORATION OF GLASS FROM CONTINUED EXPOSURE TO LIGHT

After some window glasses have been exposed to intense sunlight for some time a violet coloration frequently develops, varying from a faint to a deeper color according to the time of exposure. The images of letters which have been removed from show windows often appear colorless against a background having a violet coloration. In 1905 Sir William Crookes presented to the Royal Society two panes of glass which had been colored a deep violet as a result of having been exposed to sunlight in South America at an altitude of almost 1,500 feet. On account of the increasing intensity of sunlight, the higher the altitude, it seems probable that the ultraviolet rays were responsible for the coloration. Indeed, it has been shown that glass can be colored violet after having been exposed for forty-eight hours to the ultraviolet rays emanating from the radiation of a mercury vapor lamp.

At one time it was supposed that the coloration was due to traces of manganese which glass manufacturers add to the glass to overcome the yellowish tint derived from the presence of iron, but this theory has been practically exploded. According to Ladenburg the coloration is the result of the formation of manganic acid from the ozone which the rays originate. But this theory is refuted by the fact that we also find the coloration inside of a Crookes tube in which the amount of oxygen is too small to be taken into consideration. It is now held that the coloration produced by ultraviolet rays, radium, *x*-rays, cathode rays, and the Becquerel rays from radioactive substances is due to very minute (ultramicroscopic) particles of metallic potassium or sodium in the glass.

DISTRIBUTION OF THE GLASS IN THE UNITED STATES

It may be interesting to note that I have found specimens of glass which had been changed from a white to an amethyst color by the sun in different parts of the country. Some I found in Philadelphia windows, and it was from these specimens that the evolution of the amethyst-tinted lenses took its inception. These window panes were brought from England seventy-five years ago, and at that time were white and clear, like any ordinary glass; but in due course of time their color has changed to a beautiful amethyst tint, and the singular fact has manifested itself that these changes only took place in the windows on the north side of streets running east and west, or else on the corner of the street where the glass was exposed to the sun. I have found other specimens of glass in Montana, Colorado, Florida, Maine, New Hampshire, New Jersey, and other states. While in Estes Park, Colorado, last summer, through the courtesy of Mr. Enos Mills, I learned that it required eighteen months to change an ordinary glass cup (white) to an amethyst tint No. 1. Mr. Mills purchased this glass cup and placed it near a spring on Long's Peak where it was constantly exposed to the sun's rays for the time mentioned, at an altitude of 12,000 feet.

THE EFFECT ON THE EYE OF ULTRAVIOLET RAYS FROM ARTIFICIAL ILLUMINATION

Artificial illumination, especially when considered from an economic standpoint, is undoubtedly the chief factor responsible for the various ocular affections attributed to the ultraviolet rays. In all large industrial establishments requiring the employment of artificial light, in all forms of passenger transportation in which electricity is used for illuminating purposes, in modern dwellings, and in the illumination of thoroughfares of all large cities as well, it has been the object to increase the luminosity of electric light appliances. The result has been that the apparent disregard of the effects on the eyes has caused an increasing number of cases, varying from simple conjunctivitis to profound ocular disturbances, as the result of electric ophthalmia. Before the introduction of electricity for illuminating purposes the cases were largely confined to accidental exposure to direct sunlight, as the viewing of solar eclipses with unprotected eyes, snow blindness, or from lightning, etc. We now find the cases increasing both in

1. Bull. de la clinique nationale ophthal. de l'hospice des Quinze Vingts, 1887, v, No. 2; 1885, iii, No. 3.
2. Arch. f. Ophth. (Graefe's), 1887, xxxiii, 3

in number and virulence among clerks, typewriters, compositors, printers, seamstresses, and, in fact, in all vocations requiring close application under artificial light.

While the ultraviolet rays generally cause intense conjunctival irritation, the crystalline lens, as a rule, prevents them from affecting the retina, the lens itself becoming intensely fluorescent, as originally shown by Widmark. That this fluorescence is to be attributed exclusively to the ultraviolet rays is proved by the fact that if a glass which will absorb the rays, such as the euphos glass discovered by Schanz and Stockhausen,[3] is placed between the eye and the source of radiation, the fluorescence disappears, only to reappear again when the glass is removed, and at the same time there occurs a reflex closure of the lids in the animal. It is now recognized that the spectrum is lengthened toward the ultraviolet side after cataract extraction, and that the erythropsia occurring in these cases is due to the influence of the ultraviolet rays on the retina. It may also occur, however, in normal eyes, as Fuchs and others have observed, when a dark hut is suddenly entered after prolonged trips among glaciers. Experiments made on the aphakic eyes of rabbits by Birch-Hirschfeld[4] have shown that, after the eyes have been exposed from half to three-quarters of an hour to the ultraviolet rays from an electric light, retinal changes appeared, characterized by a solution of the chromatin substance of the ganglion cells, the formation of vacuoles in the protoplasm, and loss of chromatin in the nuclei of the inner nuclear l yer, and a bleaching and change in structure in the nuclei of the outer nuclear layer. The absorption of ultraviolet rays by the lens has furthermore been substantiated by Schulek, Hertel and others.

PROTECTION OF THE EYES FROM THE ULTRAVIOLET RAYS

The large number of theoretical data which have been obtained in the search for the proper coloration of glass as a means of protecting the eye against ultraviolet rays, particularly those of from 300 to 400 mm. wave length, largely depend on animal experimentation, the human eye being obviously unfit for such investigations. And yet, after all the painstaking experimentation on the part of such singularly astute observers as F. Schanz and K. Stockhausen,[3] the astonishing assertion is made by them that, although their euphos glass succeeds in absorbing the ultraviolet rays, it is more practical to use it for the manufacture of lamp chimneys, electric light bulbs, etc., than to employ it for the manufacture of spectacle lenses. Furthermore, while the discovery of this glass fulfills the purpose of protecting the eyes from ultraviolet rays, it is admitted that it is not a matter in indifference if the eye is entirely removed from the influence of the rays.

While theoretically, and scientifically, much has been done toward solving the matter, the practical side of the question is, after all, the one toward which we must look for an answer, once more illustrating, what has so often been found in the development of medical science, that an empirical fact is often the forerunner of a scientific discovery. Vaccination was discovered long before the theories of immunity were established on a scientific basis, nor could it wait for a theoretical corroboration; quinin was discovered as a specific for malaria long before the microscope became trained on its etiologic factor; likewise many therapeutic measures were discovered and successfully employed long before their scientific status had been established.

3. Arch. f. Ophth. (Graefe's), lxix, 49.
4. Trans. German Ophth. Society, Heidelberg, Sept. 14, 1903.

AMETHYST-TINTED LENSES

As stated above, the amethyst-tinted lenses had their inception in my observations of the sun-colored glass. The only mention in literature that I have been able to find relating even to the experimental use of window glass is that of Widmark, who found that the interposition of a piece of window glass 2.5 mm. in thickness between the source of light and the eye lessened the severity of the symptoms. It does not state, however, whether this piece of window glass had previously been exposed to action of sunlight. F. Schanz and K. Stockhausen also tried the experiment with a piece of plate glass 18 mm. in thickness, using an arc lamp very profuse in its ultraviolet radiations, but in their experiments the symptoms were not materially influenced. It is possible that the plate glass in their case had never been exposed to sunlight, while the window glass of Widmark probably had.

As the amethyst window glass of Philadelphia is becoming continually scarcer, efforts are now being made to procure the coloration by artificial means. I am not yet prepared to state whether the artificial glass will have the same therapeutic effect as that naturally colored, but this will be a subject of future observation.

I have graded the color into various shades, calling them 1, 2 and 3, respectively, and am using them according to the manifest clinical conditions.

The glass can be used in the manufacture of lenses of all foci and curvatures.

THERAPEUTIC INDICATIONS AND RESULTS

The results which I have obtained from amethyst-tinted lenses date back to their employment in the case of dentists afflicted with goldblindness and cover an experience of over twenty years. In cases of asthenopia the results have been most gratifying. In the case of printers, typewriters, students, seamstresses, and all those who are required to apply the eyes closely under artificial illumination, prompt and permanent relief was afforded, especially when the amethyst tint was incorporated with correcting lenses. Especially in asthenopia of anemic women the results were most satisfactory; like results were obtained in other cases of ocular fatigue. No. 1 tint is prescribed in all mild forms of asthenopia; No. 2 and 3 in severer forms. As the severe cases become relieved I change to No. 1 color, and these are then worn indefinitely. After wearing even the pale tint the patient does not care to go back to the colorless glass. The glass has been prescribed with great relief to those whose eyes are exposed in *x*-ray laboratories. In one case a patient of mine who had been almost blind for red, as a result of continually working on that color in a factory, was promptly and permanently relieved by amethyst tint No. 3. On my recommendation many of my friends have prescribed this glass and have met with the same beneficial results.

I have requested various opticians of Philadelphia to furnish lists of the number of prescriptions for amethyst lenses, filled during the last five years, and as nearly as we could ascertain there were about three thousand. A majority of these prescriptions were given by Philadelphia ophthalmic surgeons and in many instances they came from elsewhere. The records also show that the demand for these glasses is increasing monthly.

Whether the production of the amethyst tint by sunlight or its reproduction by artificial means imparts a quality to the glass which acts as an immunizing agent

V 53
1909

against the harmful effects of excessive ultraviolet rays, or whether the beneficial results obtained depend on purely spectroscopic principles, future observations will determine.

1304 Walnut Street.

ABSTRACT OF DISCUSSION

DR. NELSON M. BLACK, Milwaukee: Dr. Fox states that "artificial illumination, especially when considered from an economic standpoint, is undoubtedly the chief factor responsible for the various ocular affections attributed to the ultraviolet rays." From this statement it is assumed that Dr. Fox considers the cause of "the various ocular affections" to be the ultraviolet rays emanating from artificial illumination.

It is a well-known fact that serious and lasting eye lesions have been induced by exposure of the eyes, even when protected, to light rich in ultraviolet rays. This is, however, usually the result of experimenting with the various arc lamps or the result of drilling armour plate with an electric arc.

Dr. Charles P. Steinmetz, probably the greatest authority in the world on electricity, in his lecture on the "Physiologic Effects of Radiation," speaking of ultraviolet rays, says:

"While artificial illuminants, and especially metal arcs, give an appreciable amount of ultraviolet light, these ultraviolet rays extend only to about one quarter octave beyond the visible violet, if, as always the case, the illuminant is enclosed by glass; the harmful effect of these long ultraviolet rays is negligible; the radiation of the sun also contains ultraviolet rays, and a large percentage, compared with the total radiation, than any glass-enclosed artificial illuminant, and as the light of the sun, that is, daylight, is recognized as perfectly harmless, as far as this specific destructive action is concerned, the same applies to the artificial illuminants, as they contain less ultraviolet rays than the light of the sun."

The above statement would make it seem that the agitation at present going on about the injurious effects of ultraviolet rays from commercial illumination is without rhyme or reason, and while the ocular discomfort which Dr. Fox has succeeded in relieving with amethyst lenses is undoubtedly due to close use of the eyes under artificial illumination, we can find the primary causative factor within the visible spectrum. This theory is founded on four main considerations: (1) The fact that sufficient ultraviolet light does not emanate from the commercially employed sources of artificial light to produce the ocular conditions mentioned in Dr. Fox's paper; (2) the effect of monochromatic light on the visual purple of the eye; (3) the fact that the amethyst-tinted lenses relieve the ocular discomfort of individuals who have vocations requiring close use of the eyes under artificial illumination, such as clerks, typewriters, printers and seamstresses; (4) the spectroscopic analysis of the amethyst-tinted glass used by Dr. Fox.

Dr. William Churchill, of the Coming Glass Company, to whom I submitted a sample of this amethyst glass for spectroscopic analysis, writes: "This amethyst glass cuts out a certain proportion of the greenish-yellow light of the spectrum; I should say, roughly, 10 or 15 per cent."

To summarize: The visual purple or protecting tissue of the retinal elements is rapidly bleached or used up by the greenish-yellow rays emanating from artificial illumination which is reflected into the eyes from material having a high degree of reflection. This visual purple can be reproduced only by exclusion of light. The eye is exposed for long intervals day after day to this reflected light; the pigment is rapidly used up and does not have a chance for reproduction; as a consequence the retinal elements are exposed to constant source of irritation which finally results in the ocular conditions mentioned by Dr. Fox.

DR. MORTIMER FRANK, Chicago: Dr. Fox and Dr. Black have evidently overlooked the valuable contribution on the subject of the action of sunlight on glass by Thomas Gaffield, before the Society of Arts of the Massachusetts Institute of Technology, at a meeting held in January, 1881. Gaffield's experiments were conducted over a period of ten years, and his conclusions can still be considered.

In Gaffield's experiments every specimen of colored glass exposed for ten years showed some change of color or tint, except some white flint glass, such as is used for fine glassware and optical glass, which showed only a very slight change of tint, leading him to think that the oxid of lead entering largely into the composition might act as a protecting shield against change by sunlight exposure. It is a curious fact, noticed by Pelouze and Percy, and confirmed by Gaffield's experiments, that with a few exceptions among the colored specimens all the glasses changed in tint or color by sunlight exposure can be restored to their original color by the heat of a glass-stainer kiln, and can again be colored after a second exposure to sunlight, and that this coloration by sunlight and decoloration by heat can be carried on indefinitely.

Gaffield, in his experiments, took notice of the part which some of the metallic oxids play in the coloration of glass, and which manganese plays in its coloration and decoloration. He suggested that the explanation of this wonderful alchemy of sunlight, whatever it may be, and however accomplished, is probably attended by two circumstances; first, by an interchange or a redistribution of the oxygen among the constituent materials of the glass; and, second, by the development in consequence of this redistribution of the special coloring power of the metallic oxid, which has the greatest affinity for oxygen, or stands in the greatest proportion to the other constituents.

In the early days the color of glass was slightly greenish owing to iron being present; to remove this color manganese was added. Under the action of sunlight the manganese became liberated and gave the violet color. We know that glass is more or less opaque to ultraviolet rays, and with that knowlelge we ought to be very careful in ascribing therapeutic results from amethyst glass to any unusual feature of the lens and overlook the psychologic element which might be obtained from its use.

DR. WALTER L. PYLE, Philadelphia: I have prescribed amethyst-tinted lenses for probably ten years, but I think with less and less frequency. I have, however, undoubtedly had numerous cases in which the results have been most remarkable. Of course, in considering these results we have to discount the psychologic element and also the careful correction of refraction at the time of last prescription. My best results have been among patients who must either read, write or do some fine manual work under an intense artificial white light, such as the Welsbach or the Nernst lamp. Contrary to my first expectations, I have not had the best results in cases of general photophobia in bright daylight. In this connection I wish to lay stress on one point particularly—it is necessary to use the *naturally* tinted lens. The artificial substitutes that I have seen have a preponderance of red tint which seems to destroy their value. There must be an abundance of amethyst-tinted glass all over the United States. In Philadelphia whenever there is an old building dismantled the opticians are on the lookout for this old window glass. If the members of the section prescribe lenses other than those of the naturally tinted glass, particularly the artificial product imported from England, I am sure that they will be disappointed in their results. In agreement with Dr. Fox, I believe that in obstinate cases of photophobia, and in special cases, such as dentist's work on gold, the natural amethyst-tinted lenses are well worth a trial.

DR. C. H. WILLIAMS, Boston: I remember being present at the meeting to which Dr. Frank refers at which Gaffield's experiments were shown, and it was a beutiful demonstration of the effect of sunlight on glass. Where the glass was protected from the sunlight it did not develop the amethyst color. I should like to ask whether any comparison has been found between the amethyst glass and the yellow amber glass and the Fiengal glass, which cut off more particularly the blue and ultraviolet rays. My experience is that they give special relief in these cases of sensitiveness of the eyes to light. There is another glass which has not been mentioned which I find in many cases still better. It is made at the Jena works in Germany and is a heavy lead glass. Ordinary glass has an index of refraction of 1.5. This new Jena glass has an index of 1.9. It is very heavy and cuts off much of the blue and ultraviolet rays. It has a little yellow tinge but very much less than the amber glass. The disadvantage is that it is very heavy and, being soft, scratches easily. In some cases of extremely high myopia I have had the best results and the patients have worn spectacles made from this glass with greater comfort than any other kind.

Dr. Barton Pitts, St. Joseph, Mo.: I have never found any beneficial effect from colored glasses no matter what color or tint used, otherwise than in special extraneous conditions; that is, in exposure to intense furnace heat, and to reflected sunlight on the water, and in pathologic conditions, such as supersensitiveness of the retina and conjunctiva from irritation. Colored glasses in such conditions as those referred to, afford some satisfaction. The health ray lens, manufactured in my section of the country, is of no especial virtue so far as I have been able to observe, nor is any tinted lens otherwise than from the psychologic effect. I believe the clearer and more perfect the lens for refraction of the ordinary rays of light by which we are surrounded, the better it is adapted for all practical purposes.

Dr. George Friebis, Philadelphia: Suetonius says that Nero, who was quite myopic, used an amethyst lens whenever he wished to see or identify an object. Suetonius, the most competent authority of that period, states that the amethyst lens was used in order to see clearly in cases of photophobia.

Dr. Walter L. Pyle, Philadelphia: My remembrance of Suetonius is that Nero used an emerald, likely of concave curvature, to improve the vision of his myopic eyes. This, I think, is also Prof. Hirschberg's belief.

Dr. George Friebis: I have just had a discussion with Dr. Bullitt, and he is also under the impression that it was an emerald instead of an amethyst which Nero used. I believed that it was the amethyst lens, although both gentlemen say I am probably in error and I am indebted to them for the correction. I simply wished to call attention to the fact that colored lenses are historic and were used as long ago as Nero's reign.

Dr. Edward Stieren, Pittsburg: The earliest account we have of the use of a tinted glass dates from Nero's time, who, being an albino, wore an emerald when viewing the gladiatorial contests. The present-day need is not for relief from daylight, as Dr. Fox has so clearly stated, but to relieve tired, aching eyes from the baneful effects of the newer electric and gas lights with their added richness in ultraviolet rays. I personally derive great relief from an amber-tinted lens; as a grateful patient remarked to me several years ago, "I wear my clear glasses outside and my amber glasses in the office. As soon as I put the latter on my eyes feel as refreshed as though I had bathed them in cold water." It is just such a relief that my eyes experience when I change to my tinted glasses after a busy day with the ophthalmoscope. The reported discovery of two Germans, Shanz and Stockhausen, of a glass impervious to the invisible radiations from light sources but perfectly transparent to luminous rays is highly interesting and opportune. With a flaming arc or Nernst lamp thus encased the acme of illumination can be obtained minus the present harmful effect.

Dr. L. Webster Fox, Philadelphia (closing): I wish to thank Dr. Black for the very interesting contribution which he has made to the scientific side of my paper, and I am also indebted to Dr. Frank for his information concerning the investigations on amethyst glass made by Garfield, of Boston, in 1881. In answer to Dr. Williams, I would say that my experience with amber glass is limited. In those patients by whom it was used it did not relieve the "hyperesthenia of the retina" as quickly as the amethyst glass. Neither did the amber glass suit the pink cheeks of the ladies of Philadelphia, who are famous for their beauty, which is certainly enhanced by purple hats, bonnets and dresses, and last but not least by amethyst-tinted glasses. This makes a harmony of color which is not only gratifying to the patient but also to her friends.

The Absorbing Capacity of the Animal Skin for Salicylic Acid and Sodium Salicylate.—Georg Schumacher (Inaugural-Dissertation, Giessen, 1908), says that the intact skin of horses, cattle, dogs and rabbits is permeable for salicylic acid either in the form of salts or in alcoholic solution. Sodium salicylate either in the form of salves or in alcoholic solution is likewise absorbed by the intact skin of these animals. The absorbed salicylic acid appeared in the urine, on an average, in two hours after application as a salve with neutral lard or lanolin as base, or as an alcoholic solution. The excretion of salicylic acid continued for approximately two days when it was applied as a salve.

REFLEX AURAL NEUROSES CAUSED BY EYESTRAIN

WITH REPORT OF CASES *

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BALTIMORE

Although nearly all the ills that flesh is heir to, not excepting dysmenorrhea, dysuria, sterility and habitual constipation, have been ascribed to eyestrain, but scant consideration has been given to the influence which, not very rarely, it exerts on the auditory apparatus. So scant, indeed, is this consideration that, though I am sure the matter has been treated of, I have been unable to find mention of it in any treatise on diseases of the eye or the ear at my command, or a single reference to it in the titles of papers contained in the Index-Catalogue of the Surgeon-General's Library.

I have heretofore, in enumerating the less common consequences of eyestrain, mentioned tinnitus aurium as one of them,[1] and in the discussion of a paper on "Objective and Subjective Tinnitus," presented to the American Otological Society, in 1896, by Dr. Alexander B. Randall, I reported a case of this character observed several years previously.[2] Since this first observation the subject has been of interest to me, and I am convinced from the number of cases of similar character which I have encountered in the interim that it is one deserving of greater consideration than it has hitherto received.

While tinnitus is the aural reflex that I have most frequently observed, as a result of eyestrain, it is not the only one. Others that may be mentioned are a "muffled" or "stuffed" sensation in the ear, pain, not severe, and as often felt around and in front of as in the ear, and impairment of hearing, which the tuning fork seemed to indicate was due to disturbance of the perceptive rather than of the conducting apparatus. Whether, as well, the vertigo recognized as a by no means unusual symptom of eyestrain, and which was present in several of my cases, deserves to be regarded as an aural reflex I am not prepared to say, though it seems not at all improbable that the derangement that gives rise to it is in the semicircular canals.

Of tinnitus due to eyestrain I have observed three distinct varieties—the more usual or vascular type, the relatively low-pitched, whirring or fluttering sound caused by irregular contractions of the tensor tympani, and the high-pitched, almost musical, intermittent tinkling produced by like contractions of the stapedius muscle.

The evidence in favor of the ocular origin of the aural sensations enumerated is, first, their disappearance after relief of the eyestrain; second, that the ear affected—for the sensations were commonly unilateral—was usually the one on the side of the more troublesome eye, and, third, that they often became more pronounced when the eyestrain was most annoying, or were brought on, or at least intensified, by use of the eyes. The ocular fault often present was astigmatism, sometimes of high degree and associated with other marked refractive errors, though in some instances it was chiefly heterophoric.

* Read in the Section on Ophthalmology of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

1. Prevalent Diseases of the Eye, p. 390.
2. Tr. Am. Otol. Soc., xi, 365.

V 53
1909

Politzer remarks, in his exhaustive and interesting discussion on "Subjective Sensations of Hearing," that such sensations are "occasionally produced reflexly from the trigeminus,"[3] and this doubtless is the explanation of those which are caused by eyestrain.

The nerve supply of the tensor tympani is derived from the motor branch of the fifth nerve; the stapedius receives a twig from the seventh, and it is as easy to comprehend how eyestrain may produce irregular contractions in these two muscles as in the orbicularis, which, as is well known, it often does.

The more subjective and more usual varieties of tinnitus, when caused by eyestrain, as well as the impairment of hearing which sometimes coexists, are to be explained, in all probability, by a vasomotor disturbance of the intralabyrinthine blood vessels. The "muffled" or "stuffed" sensation in the ear, not infrequently complained of, may be similarly explained, or, like the otalgia, may be due simply to a reflex irritation of aural branches of the trigeminus, of which familiar examples, such as otalgia dentalis, might be cited.

I have the notes accessible of about twenty cases of subjective aural sensations which, it seemed probable, were produced, in part at least, by eyestrain. I shall, however, describe briefly but four of the most striking of these, and first I may speak of a personal experience.

CASE 1.—Having inherited what may be termed a very intractable pair of myopic and astigmatic eyes, I have had occasion to adjust and readjust my glasses oftener than I care to confess. About sixteen years ago I developed a very subjective, one-sided tinnitus, which persisted for some weeks despite my efforts to rid myself of it. Finally it occurred to me that my eyes, which were giving me trouble at the time, might be responsible for it. I, therefore, readjusted my glasses, and the tinnitus promptly disappeared. Some months afterward it returned, and disappeared as quickly as before with another change of glasses.

Several years elapsed without further aural sensations, when a tinnitus of a different character made its appearance—an intermittent, whirring or fluttering sound, less subjective than the tinnitus previously experienced—which I made no doubt was caused by irregular contractions of the tensor tympani. This, too, promptly ceased when my glasses were once more modified.

More recently, with a return of asthenopic symptoms, I became aware of an intermittent clicking or tinkling sound, of high pitch, in the right ear, the previous sounds, if I remember rightly, having been heard always in the left ear. Sometimes there would be a single click, sometimes two or three in rapid succession, and again a longer succession of clicks—a not unpleasant, semimusical metallic tinkling. The sensation was much less annoying and entirely unlike that previously experienced from irregular contractions of the tensor tympani, and was, I feel sure, caused by like contractions of the stapedius muscle. As had happened before, it disappeared with a further change of glasses and relief of the asthenopia. It may be of interest to add that I have in times past been annoyed by spasmodic twitching of the palpebral fibers of the orbicularis palpebrarum.

CASE 2.—Mr. N., aged 19, a student in Johns Hopkins Medical School, complained of asthenopia, chiefly in right eye, a "stuffed" feeling in right ear, a numb sensation around and in front of this ear, and occasional giddiness. Choreic contractions of the right orbicularis palpebrarum, of the levator of the upper lip on the same side, and of some one of the small muscles having to do with the nose, which caused perceptible movements of his eyeglasses, were subsequently observed.

Examination.—He was found to have a low grade of hypermetropia, slightly greater in the right eye, and a very high degree of left hyperphoria.

Treatment.—Notwithstanding the great amount of hyperphoria shown by the tests—from 10 to 16 degrees in distant, and from 20 to 22 degrees in near vision—he was not inclined to accept a very considerable prismatic correction. Spheroprismatic lenses correcting his manifest hypermetropia and but 4° of the hyperphoria were, therefore, prescribed. These for a time afforded a measure of relief. Subsequently, I performed a "guarded" tenotomy on the left superior rectus, reducing the hyperphoria by about 8°, and this, supplemented by the glasses, which he continued to wear, was followed by more decided relief as to both the asthenopia and the reflex symptoms.

Result.—The relief, however, was not complete, and has not proved lasting, and as the residual hyperphoria is still marked, I am waiting for an opportunity of a short rest from work, which he will soon have, to tenotomize the right inferior rectus. I may add that the patient notices a definite improvement in the aural manifestations from even a brief rest of the eyes from near work, and, further, that his hearing is not impaired.

CASE 3.—Mrs. R., aged 37, consulted me in November, 1908, complaining of asthenopia, headache, giddiness, a "stuffed" feeling in the ears, and of bilateral earache, which had manifested itself only a short time previously. She was found to have compound hypermetropic astigmatism, and glasses, for constant use, were prescribed as follows:

R. eye + .62s ⌒ + .25c 100°
L. eye + .50s ⌒ + .37c 100°

She was requested to report the effect produced, and, on January 5, wrote me: "I have found a great deal of relief from headache and dizziness by the constant wearing of the glasses. I have suffered no inconvenience from earache, and have at no time since seeing you noticed any muffled feeling in my head."

CASE 4.—Mr. S., aged 45, of distinctly neurasthenic temperament, complained of tinnitus, occasional giddiness, a "stuffed" feeling in the ears, nervousness, and "severe pain in the head." Attempts to use the eyes in reading, he said, increased the tinnitus and nervousness. The pain was more severe on the right side of the head, the noise louder in the right ear, and in addition to the tinnitus, which was constant, he occasionally experienced a "clicking" sensation, usually in this same ear.

Examination.—He was wearing, in far and near, + 1.s lenses, prescribed by a well known New York oculist. His hearing was practically normal for watch and voice, and the tuning fork showed nothing worthy of note. With his glasses on, the muscle balance was normal, except that he had only 1/2° of exophoria at the reading distance. Compound hypermetropic astigmatism, against the rule, was easily made out; but, as the ciliary muscles were very irritable, a cycloplegic was employed.

Treatment.—As a result of several tests, glasses were prescribed for distance as follows:

R. eye + 1.75s ⌒ — .50c 95°
L. eye + 1.75s ⌒ — .37c 75°

and for reading the sphericals were increased in strength .75D. Three months later the correction for distance was changed to:

R. eye + 2.37s ⌒ — 1.12c 97½°
L. eye + 2.12s ⌒ — .50c 70°

and + .62s was added for near vision.

Result.—As a result of this change, his asthenopia and head pains were relieved, and after a few weeks, ammonium chlorid having been administered in the meantime, he reported the tinnitus as appreciably lessened, and as having become intermittent.

Subsequent History.—Nearly four years elapsed without the patient having further occasion to see me, when a return of asthenopia from near use of the eyes, occasional headaches, failing vision for small print, and "some tinnitus," which he was not disposed to admit he had ever been entirely rid of, led him to seek further advice. An increase of .12 D in the astigmatic correction of the right eye was found to be indicated and, of course, a considerable strengthening of his presbyopic lenses. This was two years ago and he has not con-

3. Diseases of the Ear. Lea Bros. & Co., p. 772.

suited me since. In reply to a recent letter addressed to him, he writes that the "noises and stuffy feelings" are better, but that he is not entirely free from them. He adds that he is now under the care of a well known psychiatrist, whose treatment has given him a great deal of relief.

ADDENDUM

When the writing of this paper, except the notes of cases reported, had been completed, Dr. H. O. Reik, whom I had asked to assist me in searching the literature for anything that might have been published having reference to the production of subjective aural sensations by eyestrain, brought to my attention the paper of Dr. F. Park Lewis,[3] of Buffalo, New York, on "The Ophthalmic Origin of Otic Disturbances, with the Cerebellar Control of the Eyes." I was much interested to find my observations confirmed by those of Dr. Lewis and to note the close similarity between some of his cases and some of my own. And especially was I interested to find mention in his enumeration of aural symptoms of the sensation of "stuffiness" in the ears which I have so frequently encountered, and which, I think it will be admitted, is not a symptom often complained of in purely aural affections.

Dr. Lewis' search of the literature bearing on "The Ophthalmic Origin of Otic Disturbances," as he phrases it, evidently has been more thorough and more successful than my own, for he mentions a case of this nature described by Dr. George T. Stevens in a paper read before the International Medical Congress in 1881; a paper by Dr. Arthur A. Boyer on "The Relative Importance of Labyrinthine and Ocular Defects in the Etiology of Vertigo," presented to the Neurological Section of the New York Academy of Medicine in 1895, in which the author cites ten cases of "vertigo and lowered hearing" associated with refractive and muscular faults, and which were relieved by their correction, and, finally, a more recent article by Dr. Marcel Rollet,[4] of Blois, "De l'influence de l'oeil sur l'oreille *à* l'état normal et pathologique."

ABSTRACT OF DISCUSSION

DR. PARK LEWIS, Buffalo: The subject of Dr. Theobald's paper is one of peculiar interest and one which I must say I had a little reluctance to present in the form of a paper because of its bizarre character. It seemed so unlikely that eyestrain could produce definite irritations in the ear that I hesitated until I was quite sure from repeated observations that ear disturbances had an eye origin before presenting the subject at a meeting of the American Ophthalmological and Otolaryngological Society at Cleveland. An interesting fact is that four or five men have independently had their attention called to the fact that certain eye conditions may be productive of disturbances of one character or another in the ear. Recently a case came under my notice of a woman, highly neurotic, who had a small corneal ulcer accompanied with a great deal of blepharospasm. With each contraction of the lid there was a sharp pain in the corresponding ear. That had continued two days. Cauterization and healing of the ulcer caused the pain to cease in the ear. Since the presentation of these papers I have been much interested at the voluntary suggestions on the part of the patients, of relationships between the ears and the eyes. Recently a patient told me that whenever she had drops put in the eye of a cycloplegic character she had a moisture in the ears. Another patient volunteered the information that when he put on glasses at the theater there was a sensation of confusion and deafness and he was obliged to take the glasses off. This may or may not mean anything, but I am inclined to believe that we will be surprised to find how many instances occur in which like conditions are found to be present. The value of this observation lies in its application. It is not merely a curious and interesting thing to note from time to time that there is a relationship between the eyes and ears, but if we get a sufficient number of cases a study of them may make it possible to determine some of the unknown pathways through which impressions are carried from one sense organ to another, and it is possible that we may find that some intractable ear conditions may have been influenced, if not produced, by eyestrain as an exciting cause.

DR. E. E. HOLT, Portland, Me.: My experience in the treatment of tinnitus aurium and allied affections coincides with Dr. Theobald's to a large extent. These affections of the ear are among the most common and troublesome the otologist is called on to treat. In the early practice of otology, treatment for the relief of tinnitus was almost wholly directed to the external and the middle ear. In many patients who had been the rounds of different practitioners and all had been done for them that seemed possible the tinnitus would still persist. Considering the marked relief given to disturbances of the nervous system by the correction of ametropia, I began testing the eyes of such patients about twenty years ago. This test was often made against the will of the patients, for they would insist that the eyes were all right. When, however, a sufficient error was found and lenses were worn for its correction relief would be given to the tinnitus aurium. We know that we give relief to affections of the eye and ear from the treatment of the nose and it seems to me that in the treatment of affections of these organs we should examine all parts and organs to which the fifth nerve is distributed. I did not know that any one had made reports relative to the correction of ametropia for the relief of tinnitus aurium. I continue the practice of examining the eyes of all patients who come to me complaining of tinnitus aurium and allied affections and prescribe glasses with excellent results. In fact, I give as much relief from having my patients wear glasses as from any other single remedy prescribed.

DR. LUCIEN HOWE, Buffalo: Although I do not think the cases are so very rare of tinnitus following efforts at accommodation, probably the explanation which the Doctor gives of the phenomenon is the right one, and as we contract one set of muscles by association we also contract another set. Just a word of criticism in the use of the term "eyestrain." I think we should do away with that term or else consider it simply the result of some pathologic condition. Thus we have astigmatism in most cases as the underlying cause. It is this which disturbs the normal balance, and produces what, for lack of a better definition, we may call imbalance. It would seem better if we could thus unify our nomenclature and get rid of some confusion.

DR. SAMUEL D. RISLEY, Philadelphia: To me, the interesting fact in Dr. Theobald's paper, and the reported cases, is the demonstration it affords of the intimate relation existing between the special senses. In the normal individual with model special sense organs there is a concordance of function which is of great importance to his comfort. In health the sense organs are in tune, to borrow for illustration an expression from another branch of science, and they act in harmony, flowing or overflowing mutually. For example, a famous musical composer called a certain opera his "yellow dog," and to me certain high notes on the piano or violin have always given the sense of pale violet. It is quite conceivable that derangement of function in any one of the special sense organs may lead to discord in the symphony of the senses, one of the illustrations of which Dr. Theobald has presented to us, naming it "reflex aural neuroses caused by eyestrain." I have seen a high pitched, whistling tinnitus, in a healthy ear, disappear at once after the correction of hypermetropic astigmatism. It is not always easy to differentiate between the senses of taste and smell. One can experimentally upset the concord between the special sense organs by placing a prism base down before an eye and then make the attempt to walk on a crowded street or to ascend the stairs.

DR. S. THEOBALD, Baltimore: I have nothing to add except a protest against the criticism of the term eyestrain. It exactly expresses what I want to convey, and it would be difficult to suggest a better term to describe it.

3. Ann. Ophth., January, 1909.
4. Rev. hebd. December, 1908.

V 53
1909

ACCOMMODATION AND DONDERS' CURVE AND THE NEED OF REVISING OUR IDEAS CONCERNING THEM *

[EDITOR'S NOTE: The article with the above title, by Dr. Alexander Duane, New York, appeared in THE JOURNAL, June 19, before the discussion thereon had been submitted to the speakers for correction. The discussion was therefore omitted at that time and is now presented below.]

ABSTRACT OF DISCUSSION

DR. EDWARD JACKSON, Denver: An experimental study like this valuable one is of practical interest largely in proportion to the near resemblance of the results obtained by laboratory tests, with those secured by methods in ordinary clinical use for the measurement of accommodation. That the resemblance is here a close one is brought out by comparison with a paper I published three years ago giving the results of testing the accommodation in 3,643 persons ranging from 5 to 70 years of age. In all of these cases the static refraction had been carefully measured for the prescription of correcting lenses, and the near point was determined, not with a special test object as in the investigation of Dr. Duane, but with fine print visible to the normal eye at 10 or 15 inches. The sources of error in such examinations referred to in the paper now under discussion were guarded against by instruction of the patient and repetition of the tests.

The results which I reported have here been reduced to a chart, a reproduction of one used to illustrate my paper, modified for comparison, by estimating the accommodation by the distance of the near point from the anterior focus of the eye, as Dr. Duane has done. Personally, I prefer to estimate the distance from the anterior principal point of the eye, at which point the ocular refraction may be taken as occurring. In any case, the real point of departure has to be the summit of the cornea, and it is quite as easy to estimate from 2 mm. back of the corneal surface as from 13 mm. in front of it. While the principal point gives us a more just conception of the true relations of the amount of accommodation at different ages, especially when the accommodation is strong as in early youth. When it comes to prescribing glasses to supplement the accommodation of the presbyope these are so weak that the distance between the anterior focus and the anterior principal point makes no practical difference (one-tenth diopter for a 3 D. lens) and may be wholly disregarded. However, my chart was constructed on the same plan as Dr. Duane's.

You will note that throughout the results of the two studies of the subject correspond closely, more closely to each other than either does to the chart of Donders. My curves, based on the larger number of cases, show, as would be expected, wider departures between the maximum and minimum and a greater regularity of averages.

My statistics include the minimum powers of accommodation found at the different ages, except in connection with well-marked oculomotor paralysis or acute diseases. Many of the cases might be criticised as distinctly abnormal. And yet it is impossible to draw any sharp line of demarcation between the normal and the abnormal cases, except that line be purely arbitrary. By any scheme the latitude for normal variations of range of accommodation is a wide one. And when the accommodation is about equal in the two eyes; and there is no pronounced ocular or general disease to influence it. The assumption seems fair that the restricted accommodation is due to the same factors, which normally limit the accommodation range.

Of the conclusions reached by Dr. Duane, I would call special attention to the seventh: The discovery several years ago that an important range of accommodation might be retained to very advanced age was quite a surprise to me. It will be noted that I give the maximum at 70 years as 1.5 D. I have seen almost or quite 1. D at 80 years of age. Some of these remarkable cases I have studied very carefully by skiascopy as well as by the ordinary method, making an objective determination of the near point and excluding any influence of a narrowed pupil, or of differences of refraction in different parts of the pupil, that might give the impression of a range of accommodation that did not actually exist. But these cases of the persistence of an important range of refraction to such advanced age are exceptional. On the other hand, are the exceptional eyes, that I must regard as normal, which lose all power of accommodation by the age of 45 or 50. A good many eyes have lost all accommodation before 60, although the persistence of accommodation at this age is much more common than is generally supposed.

With regard to the rather rapid decline of accommodation at certain periods, shown in Dr. Duane's charts, and still more strikingly exhibited by the charts of accommodation of individual cases, there is this to be said: They are probably due, at least to a large extent, to strain of accommodation and to temporary departures from health of the individual. I would regard them as more distinctly abnormal than the low minimums of accommodation that I have admitted in my statistics. The chart shows such a rapid drop between the ages of 40 and 50, when a very large number of people are straining their accommodation to put off the evil day of wearing glasses for presbyopia, or of changing to "stronger" glasses. After adjustment of the proper glasses I have many times seen the decline of accommodation wholly cease for two or three years, and in not a few cases there has been a gradual increase of accommodation extending over several weeks or months. Finally, without detracting from the just fame and pre-eminence of Donders, based on the work that he did in this connection, we can congratulate the section that in this experimental study presented by Dr. Duane there has been a distinct advance in this important field of practical ophthalmology.

DR. ALEXANDER DUANE, New York: When I first began tabulating these cases I found a large number of very low ranges of accommodation. Examining these same patients a year afterward, I found in many instances a higher range of accommodation, and it was evident that the low range previously found had been due to temporary causes in many cases of neurasthenia. That is, I found a neurasthenic weakness of accommodation, which was in a way characteristic, and also found that when the patient's general condition improved the accommodation would come up a number of diopters and be maintained at a high point. More than that, I found that by systematic practice with the test-object described the accommodation could actually be stimulated in these cases. I do not mean, of course, that this could be done in cases of real paresis of accommodation. I mean that in the subnormal accommodation of the neurasthenic the accommodation can apparently be increased by systematic exercises and the patient's subjective symptoms can be correspondingly improved.

Now as to the rapid drop in the accommodation which the same patient may show when examined at short intervals. I agree with Dr. Jackson that in many cases this is abnormal, being due to temporary causes. The marked drop normally occurring between the ages of 38 and 50 is present in both Dr Jackson's chart and mine, and in my paper attention is called to the fact that this drop is twice as great as Donders found in the same period.

* Read in the Section on Ophthalmology of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909

A Herniotomy Under Difficulties.—There is a hospital in Aintab, Turkey, which is famous throughout all Northern Syria. It was established and is presided over by Dr. F. D. Shepard, a medical missionary under the American Board. He was once asked what he considered his most successful surgical operation. He replied: "An operation I once performed for strangulated hernia, in the night, in an old hovel without floor or bed or window, the patient, a man, lying on a mass of filthy rags on the ground that had been trodden by the feet of ten generations at least, my only assistant an old, ignorant woman who held the native oil lamp that gave off 90 per cent. smoke and smell to 10 per cent. of light. The operation had to be performed at once or the patient must die. He made a good recovery, thus proving the uncertainty of the microbe theory as applied to those conditions."

Clinical Notes

MASTOIDITIS DUE TO THE MICRO-ORGANISMS OF VINCENT'S ANGINA

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The following case is unique in several particulars. The character of the infection, the pathologic conditions found on operation, and the curative measures adopted were all unusual in my experience.

Patient.—M. C., a girl of 12, was admitted to the New York Eye and Ear Infirmary (service of Dr. Kenefick) and came under my care Dec. 11, 1908. The history was briefly that of a neglected running ear of several month's standing. Two weeks before coming to the hospital the child complained of earache, headache and tenderness back of the ear. A swelling over the mastoid region made its appearance, but nothing was done until the symptoms became urgent and the patient's condition bad. On examination the usual signs of a subperiosteal abscess were found. A large, soft, fluctuating mass occupied the postauricular region, and bulged into and occluded the canal so that inspection of the drum was impossible. Thick, foul pus issued from the meatus. The temperature was 101 F. and the general condition mildly septic.

Operation.—An abscess cavity containing about one and a half ounces of evil-smelling pus was opened by a small incision behind the ear. The mastoid area was then laid open in the ordinary way. The soft parts being retracted, a most unusual picture was revealed. The larger part of the mastoid cortex had disappeared, and left exposed to view a dark-red, spongy mass that filled the entire space normally occupied by the cellular structure of the bone. The dura of the middle fossa was extensively exposed, the lateral sinus uncovered from knee to bulb, and a part of the posterior bony canal wall destroyed. Throughout the spongy mass (which was taken to be partially organized granulations) were scattered small, dark sequestra, like plums in a pudding. The sinus was covered with a stringy, yellowish membrane, giving the appearance at first glance of a thrombosed and shriveled vein. Further investigation, however, showed that the sinus was not involved. All diseased tissue having been removed, the question arose as to whether or not a "radical" operation was indicated. The fact that the middle ear had not been inspected, and the presence of the unusual, gave us pause. Moreover, I hesitated to plaster back flaps on so much exposed dura. It was therefore decided to content ourselves with the simple Schwartze operation. The wound was flushed with alcohol and normal saline solution, closed above, packed with iodoform gauze and dressed.

The laboratory report showed the infection to be a mixed one, due to the micro-organisms of Vincent's angina (*Spirochæta dentícola and Bacillus fusiformis*).

Subsequent History.—The patient remained in the hospital twelve days; the temperature became normal and healing progressed satisfactorily, although the dressings were foul and a most penetrating putrid odor persisted. There was a steady gain in the physical condition. The case being of some interest, the patient did after her kind, and promptly vanished on transfer to the outdoor department. She was found by Dr. Eves, the house officer, at Carteret, N. J., and a month later Dr. Reason, her family physician, kindly had her report at the clinic. The mastoid had healed, but the ear was still discharging. Examination of the pus still showed the bacteria. The patient again remained away for a month, contracting measles. During her illness the trouble in the ear lighted up and a discharging sinus appeared behind the ear, with tenderness and some swelling. On her return she was taken into the ward and a radical operation again considered and rejected as entailing too much risk. The acute symptoms abated, however. After two weeks' further dressing and treatment the sinus refusing to close, I determined to try Dr. North's lactic acid serum,[1] a supply of which the doctor kindly placed at my disposal. The treatment was carried out as follows: The aural canal and sinus having been thoroughly irrigated with normal saline solution and dried by sponging, the child reclined on the side opposite the affected ear, and the serum was simply poured into the canal until it made its appearance in the sinus behind the auricle. A sterile dressing was then applied, and the procedure repeated two days later. Under this treatment the sinus closed and the ear ceased discharging in ten days. After a short period of observation the patient was discharged with a dry ear (the drum and larger ossicles being destroyed of course) and good function, the low whisper being heard at fifteen feet.

The case suggests several observations. The character of this infection in the throat is now fairly well known. Vincent's angina is among the most tenacious and troublesome of diseases. In the mastoid cells the bacteria seem to follow a slow, insidious, but destructive career, giving rise to few symptoms until softening is far advanced. Whether or not they can attack the ear primarily is a question. My belief is that they can not, but owe their entry into the tympanum to the good offices of a preceding infection. North's lactic acid preparation must be given credit for eradicating the disease in this case. Whether it has a specific action against the organisms of Vincent's angina, and whether it will prove efficacious in the throat are questions which should be investigated. The case just related was a favorable one anatomically for the serum, since every part of the cavity could be reached and the medicament retained for a considerable time. Evidence is lacking as to whether the associated organisms described by Vincent are capable of producing the necrosis of tissue found in this case, and as to whether they occur in pure culture. R. J. Held[2] fully reported a case in which a pure culture is said to have existed, and in which there was extensive destruction, death occurring from purulent meningitis, after a radical operation had been done. Held calls attention to the characteristic and persistent odor. At the laboratory of the New York Eye and Ear Infirmary, Vincent's spirillum is found not infrequently in the pus from the middle ear, mastoid and even old brain abscess, but always in association with other organisms.

79 West One-hundred-and-fourth Street.

Hereditary Muscular Atrophy.—The condition of muscle atrophy was traced through a number of family lineages by A. Kehrer (Inaug. Diss., Heidelberg, 1909). It occurs relatively seldom and conforms to the theory of heredity as advocated by Mendel and further extended by Bing. Children otherwise sound were found to show the phenomenon. As was found by Bing for other diseases, hereditary muscle atrophy proved to be transmitted three times as often by the mother as by the father. The disease considered by Kehrer belonged to the dystrophic type of atrophy, and in the main to the scapulohumeral type. The dystrophy often extended to the back muscles, but there is reported a complete absence of nervous symptoms, as well as also all indications of pseudohypertrophy of the muscular elements. Two cases of apparently neurotic muscle atrophy are also described at length. These are considered to be hereditary or endogenous and to represent the total number of cases of such reported in the literature. A tabulation of the cases of neurotic muscle atrophy heretofore reported is given. All of these, however, are associated with tabes or other systemic disorders and are considered purely exogenous.

1. This is a suspension of a pure culture of lactic acid bacteria in bouillon. See North, Charles E.: Reports of 300 Cases Treated with a Culture of Lactic Acid Bacteria, Med. Rec., March 27, 1909.
2. Post-Graduate, September, 1906.

V 53
1909

GASTRIC SARCOMA

G. K. DICKINSON, M.D.
JERSEY CITY, N. J.

History.—For nine days Mrs. S., aged 53, an Italian who could speak no English, was attended by her physician, Dr. Stack of Hoboken, who could not understand Italian. The main observations made were: Rise in temperature, which, at the time of consultation, the ninth day, was 104 plus in the rectum, with a pulse of 110 and respiration in the twenties. The patient placed her hand on the upper portion of the abdomen, seeming there to locate the distress; examination revealed a rigidity of the recti in that region; pressure caused expressions of pain, which was, apparently, more acute at Robson's point; examination of the chest and lower portion of the abdomen elicited no evidence of lesion. A tentative diagnosis of cholecystitis was made and the patient was removed to Christ Hospital. On the tenth day of the disease rectal temperature had dropped to 101; the abdomen had softened and a lump was discovered at the left of the mesial line just below the costal margin. It was deemed advisable to proceed with operation.

Operation.—The patient was celiotomized through the right rectus. The gall bladder was found perfectly normal, containing limpid bile. There was no evidence of past inflammation of it or of the ducts. There were no calculi. The duodenum and pylorus showed no defect. The head of the pancreas was normal to the touch and was not movable. The stomach on delivery was about 17 cm. long, and on its anterior surface midway between the orifices was a nodular growth, hemispherical in shape, 4 cm. in diameter, rather purplish at apex, assuming the color and appearance of the stomach at margin. Its upper edge overlapped the lesser curvature. The stomach was completely delivered, the lesser curvature stretched open, and between clips this growth and a cuff of a centimeter was removed, requiring a V-shaped resection from the anterior wall and a partial resection of over 6 cm. of the lesser curvature. The stomach wound was closed by the usual method and the viscus dropped.

Postoperative History.—The day following the operation the temperature again went to 104, and this elevation of temperature was maintained for six days, with corresponding acceleration of pulse and respiratory movement. On the fifth day after the operation she began coughing and a plastic pneumonia of the right lower lobe was discovered, but from this on a steady convalescence was maintained and she was discharged from the hospital on the fourteenth day after the operation.

Pathologic Report.—The tumor was referred to Dr. G. E. McLaughlin, pathologist of Christ Hospital, who made the following report: "The tumor from Mrs. S., received May 17, 1909, had a distinct capsule, from which it could be shelled out without evidence of special adherence and without any penetration of gastric mucosa. Microscopic examination of the stained sections showed a rather dense mass of large spindle cells with large and well stained nuclei and with numerous capillary blood vessels. In some portions these vessels were very much dilated and of a decided angiomatous type. There was also noticed some dilatation of the lymphatics. Diagnosis: Nodular sarcoma (spindle cell) of the exogastric type."

The reason for reporting this case is the rare occurrence of sarcoma of the stomach and the fact that there are very few cases mentioned in literature in which the histologic report has been given. Hosch, out of 13,387 autopsies of stomach tumors, found six gastric sarcomas. Yates gives the proportion of spindle celled sarcomas as being 33 per cent.; the position of the sarcoma, according to this writer, is generally reverse to that of carcinoma. Fenrick reported but 53 recorded cases of sarcoma which were proved. Of these, 12 were spindle cells.

An interpreter was employed after the operation and an effort made to discover any symptoms which might be ascribed to the presence of the growth, but the patient denied any "stomach symptoms."

Of course, the febrile state preceding the operation was not explained by the findings. In conclusion, I am inclined to think that there was a hidden pneumonia which had reached a crisis on the day of the operation, and either through reinfection, or irritation of the anesthetic (ether, drop method), or through an embolic spray from the site of operation, a fresh pneumonia was established.

280 Montgomery Street.

A FILTRATOMETER

GEORGE JONES, M.D.
TOLEDO

The illustration shows a convenient little instrument which is especially useful to those making analyses of gastric filtrates.

It consists of a graduated glass barrel and asbestos-wrapped plunger, the whole apparatus being about the size and shape of an old-style urethral syringe (2 dram). I have used this filtratometer for about a year and have discarded all other pipettes. Its advantages are apparent or will be quickly seen if the instrument is used. I have found no objections to it, and repeated tests have proved that it may be thoroughly cleansed. After drawing up the filtrate, the instrument is taken in one hand, the little finger encircling the barrel above the graduations, while the thumb rests on the top of the plunger and forces the fluid to the desired level. All the fluid may then be expelled by a few short movements of the plunger.

845 Nicholas Building.

DECAPSULATION OF BOTH KIDNEYS FOR ACUTE NEPHRITIS FOLLOWING SCARLET FEVER

G. F. HARDING, M.D.
SALT LAKE CITY

History.—A boy, aged 12, had an ordinary case of scarlet fever with only a moderately high temperature and well-defined rash; was out of bed on the tenth day, feeling well and showing no signs of any complications. Urinalysis, made on the fifteenth day, showed no trace of albumin or sugar; specific gravity of 1023. Twenty days after the onset of the fever the boy was taken with severe vomiting; twelve hours later he had a hard convulsion, and passed a small amount of bloody urine heavily loaded with albumin. The boy was put in hot packs with hot linseed poultices over the kidneys, pilocarpin and digitalin given hypodermatically. This treatment was followed four successive days with no apparent benefit. On the morning of the fifth day there was complete loss of vision and hearing, and a few hours later the patient lapsed into unconsciousness, with complete suppression of urine.

Operation.—Drs. Middleton, Allen and Calderwood were called into consultation on the case, and it was decided to do a Diebold operation on both kidneys. The boy was removed to the Latter Day Saints Hospital the next morning, and under ether anesthesia both kidneys were decapsulated at the same time. They were found to be as large as an adult's kidneys, very tense and congested. On removal of the capsule the blood fairly boiled from the kidney surface, showing the very high pressure it was under.

Postoperative History.—The first twenty-four hours after operation the apparently functionless kidneys secreted twenty-four ounces of urine. On the third day sight and hearing began to return, and at the end of the first week both were normal. The kidneys were also secreting the normal amount of urine. The boy left the hospital on the eighteenth day, able to walk, and feeling normal in every way.

Therapeutics

DIABETES

The dietetic treatment of this disease is well described by Theodore C. Janeway in the *American Journal of the Medical Sciences*, March, 1909.

Before inaugurating any particular diet for the diabetic patient it is necessary to learn exactly his ability to metabolize properly carbohydrates and sugars. Janeway gives the usual caution of not making the diet too rigid for a patient whose ability to care for a carbohydrate-free diet without causing acidemia has not yet been ascertained. However, he states that patients who can not at first stand a rigid diet without the appearance of diacetic and beta-oxybutyric acids in the urine may after a period of such diet be free from such symptoms of increased systemic acidity. It is not the purpose of this article to describe the various standard diets for mild, moderately severe, and severe cases of diabetes; for these the clinician is referred to Dr. Janeway's paper.

The patient is first put on a rigid diet with the addition of a known amount of white bread, three ounces at first, a day. The amount of sugar in the urine is noted and the amount of bread generally reduced, if diacetic acid or ammonia do not appear in the urine. It is thus soon found whether the patient has glycosuria on a carbohydrate-free diet. If glycosuria persists, the patient has the disease in a moderately severe form, and the proteids are then reduced in amount. If with carbohydrate-free and protein-restricted diet the patient still passes large amounts of sugar, then the disease is severe, and the diet that will keep up the patient's weight and cause the least excretion of sugar is the one that should be selected. When the patient's urine becomes clear of sugar on the restricted diet, it will often be found that later one or more of the carbohydrate foods in small amounts may be added, he having acquired a tolerance for them. It may, however, be found that a patient with mild diabetes may tolerate one starch better than another; this should be determined by investigation.

When too little carbohydrate is ingested, or too little burned in the system, the fatty acids are burned, and may form beta-oxybutyric acid, which is perhaps often the precursor of diacetic acid and acetone.

Whenever diacetic acid appears in the urine, which is the acid product whose presence it is the easiest to determine, ordinarily more carbohydrate food should be given, and that immediately, as there certainly is danger of acidemia and coma. Diacetic acid should be tested for on every examination of the urine, and is of as much importance, or more, to the patient, as is the amount of sugar in any given specimen. The simplest test for diacetic acid is a drop of a 5 per cent. ferric chlorid watery solution or a drop of a 5 per cent. ferric alum watery solution in a test-tube one-third full of urine. A crimson color denotes the presence of diacetic acid; the more intense the color, the greater the amount of the acid.

The amount of fat that should be given to offset the carbohydrate removed from the diet must be determined for each individual patient by his ability to digest it without stomach or intestinal disturbance, and by the maintenance of his normal body weight. The more fatty meats may be advised in lieu of actual oil and fats. Janeway finds that a patient will digest more fats when alcohol is allowed him than when he does not take alcohol, and in fact finds that patients on a starch-free diet who must take large amounts of fat can not digest it without alcohol. Of course, alcohol also furnishes heat to the body.

Janeway speaks of the hunger days, or the days of low diet which has now come to be generally advised in diabetic patients, and the same is of advantage in patients with chronic nephritis. In these hunger days of diabetics various simple low nutritives may be given, as broths, some green vegetables, a little butter, a little coffee, and alcohol in some form. Sometimes skimmed milk is an advantageous diet for such a starvation day.

Such changes from much to very little carbohydrate in the food must not be made. The gradation should be gradual and not sudden, and there seems to be less likelihood of acidemia. If acidemia occurs Janeway thinks that it is not often successfully removed by allowing large amounts of carbohydrates, but certainly starches should be freely given if diacetic acid is found in the urine or other symptoms of acidemia are present. It is, however, much better so gradually and carefully to modify the diet with repeated examinations of the urine that acidemia is prevented rather than to combat it when it has occurred.

GAS POISONING

In the *Boston Medical and Surgical Journal*, May 27, 1909, Dr. Harold W. Dana, Boston, describes a method of treatment found successful in all of the six instances reported. While some of the treatment was varied in the individual cases, the main treatment to which Dana ascribes the success is the subcutaneous injection of from 1 to 2 pints of hot sterile modified Ringer's solution. The injection was always made under the breasts, and the solution used is as follows:

Calcium chlorid	.25 gram.
Potassium chlorid	.083 gram.
Sodium chlorid	7.50 gram.
Distilled water	1000. c.c.

Other treatments which were instituted were oxygen inhalations, the hypodermic injection of 1/40 of a grain of sulphate of strychnin, hot milk by the mouth and sometimes by the rectum, sometimes brandy or whiskey, sometimes 1/100 of a grain of atropin hypodermatically, and sometimes the patient was surrounded with dry heat. Sometimes ammonium carbonate, 0.30 gram (5 grains), once in four hours, was administered. Sometimes caffein was used. A favorite mixture for administration was as follows:

R.	gm. or c.c.	
Strychninæ sulphatis	.008	gr. ⅛
Ammonii carbonatis	1.60 or	gr. xxv
Spiritus frumenti	150	fl.℥v

M. et Sig.: Two tablespoonfuls, in water, every 4 hours.

Leukemia and Kidney Stones.—F. Leclerc reports in the *Lyon Médical*, Jan. 10, 1909, a case of leukemia in a man of 55 long subject to gout and voiding gravel and stones at times. The leukemia came on two years ago, and is of the myeloid type with predominance of polynuclears over the myelocytes. Leclerc has found only three similar cases on record, which he summarizes and discusses the uric dyscrasia in connection therewith. It seems probable that there is more than mere casual coincidence between the leukemia and renal lithiasis, as recent research has revealed the part played by the leucocytes in the production of uric acid. In three of the four cases there were no signs of kidney stones until after the onset of the leukemia. It is remarkable, he says, that the coincidence of leukemia and renal lithiasis is not more frequent.

V 53 1909

New and Nonofficial Remedies

SINCE THE PUBLICATION OF THE BOOK "NEW AND NONOFFICIAL REMEDIES, 1909," THE FOLLOWING ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK ARE ASKED FOR.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

(Continued from page 33)

SODIUM PERBORATE—Sodii Perboras.

Sodium perborate, $NaBO_3.4H_2O$, is the sodium salt of perboric acid. It should contain not less than 9 per cent. of available oxygen.

Sodium perborate may be prepared by the action of an alkali peroxide and carbon dioxide on an alkali borate (U. S. Pat. No. 842,470) and by other methods.

Sodium perborate occurs as a white granular salt, odorless and soluble in water; the solution then has a saline taste. It is decomposed by water into hydrogen peroxide and sodium metaborate, $NaBO_3 + H_2O = H_2O_2 + NaBO_2$ producing an alkaline solution. It is decomposed by catalyzers, ferments and animal tissues. Heated to 60° C. (140° F.) it evolves oxygen and when heated to a higher temperature it gradually loses all its available oxygen and water of crystallization.

On adding to 10 Cc. water in a test tube, one drop of potassium dichromate test solution then ten drops of dilute sulphuric acid and pouring a few Cc. of ether on top, the subsequent addition of a few drops of an aqueous solution of sodium perborate will cause a blue color to appear at the zone of contact of the two liquids. After shaking the ether layer will separate with a blue color.

If 0.20-0.03 Gm. sodium perborate accurately weighed be dissolved in 50 Cc. water and 10 Cc. dilute sulphuric acid added, to produce a permanent pink color, not less than 11.25 Cc. tenth normal permanganate solution should be required for each 0.1 Gm. of substance taken (indicating not less than 9 per cent. of available oxygen).

Action and Uses.—Sodium perborate is an antiseptic, deodorant and bactericide, and is used in wounds, purulent sores, varicose ulcers, etc. In general, it is used in place of hydrogen peroxide, over which it has the advantage of yielding an alkaline solution. It is applied as a dusting powder or in a 2 per cent. solution.

Non-proprietary Preparation:

Sodium Perborate Merck. E. Merck, Darmstadt (Merck & Co.).

HEMOGLUBIN—Haemoglobinum.—Haemoglobin, Haematocrystallin. The red coloring matter of blood.

Hemoglobin is a brownish-red powder, soluble in water. It is decomposed by extremely small amounts of acids, coagulates at 64° (147.2° F.) and is dextro-rotatory. It does not give characteristic albumin or iron reactions until decomposed. A solution mixed with a little sodium chlorid, evaporated over sulphuric acid to a syrupy consistence, mixed with 15 times its volume of glacial acetic acid and heated on a water bath for several hours, yields on cooling flat rhombic crystals of haematin hydrochloride with a dark violet red color and metallic luster.

Action and Uses.—See organic iron. It is converted into hematin in the stomach.

Dosage.—0.3 to 2 Gm. (5 to 30 grains).

OSMIUM TETROXIDE—Osmium Tetroxidum.—Osmic acid, Osmium anhydride.

Osmium tetroxide, OsO_4, the anhydride of a theoretical acid, is obtained by the action of nitrohydrochloric acid on osmium.

Osmium tetroxide occurs in the form of white or yellowish crystals which are slowly soluble in water (1-50); it is also soluble in alcohol and ether but the solutions decompose. Osmium tetroxide melts at 40° C. (104° F.) and boils at about 100° C. (212° F.). It vaporizes even at ordinary temperatures yielding very irritating and extremely poisonous vapors, attacking the eyes and lungs. It is decomposed by contact with organic substances. (Brit. Codex, 1907).

From aqueous acidified solutions of osmium tetroxide, hydrogen sulphide precipitates brown osmium sulphide, OsS_4, which is insoluble in ammonium sulphide. An aqueous solution of osmium tetroxide decolorizes indigo solution. Iodine is liberated from potassium iodide solutions by osmium tetroxide. Treated with sulphuric acid, aqueous solutions of osmium tetroxide become yellow, turning to brown and finally becoming blue; tannic acid produces a red color becoming brown; ferric chlorid and alcohol reduce osmium tetroxide to the metal osmium.

Action and Uses.—Intraneural injections are used to produce degeneration of nerves for the relief of persistent neuralgias. The treatment is best applied by injecting ½ to 1 Cc. of a fresh 1 to 2 per cent. solution directly into the, preferably exposed, nerve. The result is sometimes immediate, but more commonly it is not complete until after one or two weeks, or it may even fail entirely. If successful, the effects may persist for several months, when it may become necessary to repeat the injection as the cure is rarely, if ever, permanent. The local reaction is always painful, but not serious. It is not advisable, perhaps, to use osmium tetroxide in renal disease.

DEXTROSE.—Saccharum Amylaceum.

Dextrose, $C_6H_{12}O_6 + H_2O$, is a carbohydrate prepared by the action of dilute acids on starch; it also occurs naturally.

Dextrose containing a molecule of water of crystallization occurs in white crystalline masses. It is soluble in its own weight of water at 15° C. (59° F.); in 50 parts alcohol (85 per cent.) at 17° C. (62.6° F.) and in 11 parts at the boiling temperature.

An aqueous solution (1-10) of dextrose should yield after the addition of dilute nitric acid not more than a slight turbidity with either barium nitrate or silver nitrate; and after the addition of ammonia should produce no precipitate with ammonium oxalate.

An aqueous solution (1-20) of dextrose should not change when heated with hydrogen sulphide.

Action and Uses.—Dextrose is quite readily digested and may be used in place of cane sugar as a food.

Dosage.—180 Gms. (6 oz.) daily.

THORIUM NITRATE—Thorii Nitras.—Thorium nitrate, $Th(NO_3)_4 + 4H_2O$, is the thorium salt of nitric acid.

Thorium nitrate occurs as white crystalline granules or lumps. Very soluble in water and alcohol. On calcification yields a voluminous, white oxide, which should amount to 48-50 per cent. of the original salt. The aqueous solution dries over sulphuric acid to a crystalline mass.

An aqueous solution gives a white precipitate with ammonium carbonate, the precipitate being completely soluble in an excess of the precipitant. The aqueous solution gives with caustic alkalies a voluminous precipitate of the hydroxide insoluble in an excess of the precipitant. The presence of tartaric acid prevents the precipitation. Potassium ferrocyanide produces an amorphous precipitate.

Action and Uses.—The soluble thorium salts bear a close resemblance to alum in their local astringent and irritant properties. They are not absorbed from the alimentary canal. Hypodermically, they cause local sloughing, and intravenously, they kill by coagulating the blood. The non-precipitant double salts are practically non-toxic, even intravenously. They are excreted by the kidneys. Thorium salts are fairly radioactive. They have been recommended for local application in malignant diseases and thorium emanation has been inhaled in phthisis. Reliable evidence as to the therapeutic value of thorium salts is lacking.

Dosage.—A solution of thorium nitrate (1 to 5) is neutralized with ammonia and allowed to stand in a bottle four-fifths full; the emanation that accumulates in the vessel is inhaled (Br. Codex).

OIL OF PINE NEEDLES—Oleum Pini.—Oil of Pine (British Pharm., edit. 8), Oleum Pini Pumilionis (Pharm. Austriaca, edit. 8). The oil distilled from the fresh leaves of Pinus Pumilio, Haenke (British Pharm., edit. 8).

Oil of pine occurs as a colorless or faintly yellowish liquid, having a pleasant, aromatic odor, and a pungent taste. The oil is soluble in 4-8 volumes 90 per cent. alcohol (Hager, 1908). Specific Gravity, 0.865 to 0.875; begins to boil at 165° C. (329° F.). (British Codex, 1907.)

It should rotate the plane of a ray of polarized light from 5° to 10° to the left at 15.5° C. (60° F.) in a tube 100 millimeters long. Not more than 10 per cent. should distil below 165° C. (329° F.).

Action and Uses.—Oil of pine is employed principally as an inhalant with hot water for its stimulating and disinfecting action in catarrh of the respiratory passages, chronic laryngitis and bronchitis. It has been applied locally and given internally in the treatment of chronic rheumatic affections. When added to ether it is said to allay the irritation and diminish the bronchial secretion, which frequently become excessive, during or after the production of anesthesia by the latter drug.

Dosage.—0.05 to 0.3 Cc. (1 to 5 minims). The oil is given internally as a respiratory antiseptic and "expectorant," being taken on sugar, in capsules, or in the form of pastilles. It is rubbed over rheumatic joints, which are then covered with cotton wool, or 4 Cc. (1 fluidram) of the oil may be added to a warm bath.

Vapor Olei Pini.—Oil of pine, 10 Cc.; Magnesium Carbonate, 5 Gm.; Distilled water, sufficient to produce 100 Cc.

Mix the oil with the magnesium carbonate and add the water. A quantity sufficient for one inhalation, 4 Cc. (1 fluidram), is to be placed with 300 Cc. (10 fluidounces) of cold water and 300 Cc. (10 fluidounces) of boiling water in an apparatus so arranged that the air to be inhaled may pass through the solution.

Pine oil inhalation is used as a mild antiseptic in catarrhal affections of the respiratory passages.

(To be continued)

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[For other information see second page following reading matter]

SATURDAY, JULY 10, 1909

THE PATHOLOGIC ANATOMY AND PATHOGENESIS OF ACUTE APPENDICITIS

After several years of extensive and systematic study, Aschoff, one of the best known pathologists in Germany, has published a monograph on appendicitis[1] which is of great importance because of its scope, its thoroughness and the apparent finality of some of its teachings. It may be of interest to discuss briefly some of the more striking results reached.

In the first place, Aschoff made a thorough study of the normal appendix at various periods of life, using for this purpose the most approved methods. In the newborn the appendix does not contain any lymph follicles in the submucosa and the lining is not folded, but during infancy and childhood the lymphatic tissue in the submucosa greatly increases, the muscularis mucosæ becomes better marked and the mucous membrane folded. In the adult the mucosa presents quite definite furrows, partly longitudinal and partly transverse, and the submucosa consists of lymphatic tissue with follicles of varying sizes and numbers, these being most marked toward the distal end.

Anatomically, Aschoff regards acute appendicitis as always one and the same disease, the different anatomic forms simply representing various stages in development or special complications. A superficial catarrhal appendicitis is not recognized; the attack is held never to begin as a diffuse surface inflammation, but always as one or several foci of primary infection in the crypts and furrows of the mucous membrane and in the subjacent tissue outside of the lymphatic follicles. The first change is a subepithelial accumulation of neutrophilic leucocytes in the bottom of a furrow, corresponding to which there is a small defect in the epithelial lining. In this stage bacteria are found only about the defect and not deeper down in the wall of the appendix. There is also more or less diffuse leucocytic infiltration which spreads out more broadly toward the serous coat than toward the mucous side. Later, in the next stage, various primary foci may coalesce and the muscular and serous coats now become more or less diffusely infiltrated with leucocytes and serum. Most instances of acute appendicitis do not pass beyond this stage, the stage of diffuse inflammation, but subside rapidly.

1. Die Wurmfortsatzentzündung, 1908.

In case the inflammation progresses, small abscesses form in the wall, which may perforate into the lumen of the appendix and thus give rise to ulcerations; or the perforation may take place into the peritoneal cavity. In some instances the submucosa may be so riddled with abscesses that the mucous membrane is loosened (appendicitis dissecans). Ulcerations arise practically always from purulent softening of the mucosa, beginning in the bottom of the furrows and thence spreading, a fibrinopurulent deposit being often present. The softening may spread into the outer walls of the appendix and give rise to larger perforations. The necrosis preceding the softening is caused partly by the toxic action of the numerous bacteria present and partly by thrombosis of the lymph and blood vessels. Quite typical anemic and hemorrhagic infarcts may form, most often opposite the mesenteric attachment because the blood-supply in this district is poorest. On entrance of putrefactive bacteria the necrosis passes into gangrene.

Aschoff distinguishes three kinds of perforations of the appendix: perforations of miliary intramural abscesses, perforations caused by more diffuse purulent softening of the wall, and perforations associated with gangrene, the latter being the largest.

As stated, acute appendicitis begins in the bottom of the normal furrows of the mucosa, the localization often being determined by obstacles to the current of its contents, as, for instance, behind a bend in the appendix. Aschoff found small fecal stones only three times in normal appendices, otherwise always in diseased appendices; hence the calculi may be regarded as rather a consequence than a cause of appendicitis, the diseased appendix being less able to dispose of the feces and mucus than a normal one. In the previously diseased appendix, calculi are of importance as they may cause retention both in the part behind them as well as in the part immediately in front of them, in the latter case because regular contractions of that part of the wall of the appendix can not take place, and thus maintain conditions favorable for continued reinfections. Accordingly inflammation is oftenest found behind the calculus, occasionally immediately in front, but, so says Aschoff, not at the points at which it comes in contact with the mucous membrane itself; but, as the wall of the appendix is often stretched over the calculus, and the nutrition consequently is not so good at that point as elsewhere, necroses are likely to occur here and lead to the large perforations seen about calculi.

Without entering into any of the details of the healing processes, suffice it to point out that acute primary infections may heal without leaving any trace; that diffuse cellular infiltrations often lead to thickening of the serosa and intermuscular septa, and that ulcerations give rise to scars on the mucosa with deformities of the lumen. More or less actual obliteration of the lumen takes place (58 times in 290 cases), the proportion of such cases being greatest in the fourth and fifth decennia. The most pronounced narrowing and cicatricial

V 53
1909

occlusions are always found behind a calculus or a bend in the appendix. Now the reparative processes after an acute attack may be prolonged on account of such changes in the lumen and on account of the presence of fecal calculi. The latter may prevent granulating surfaces from coming in contact, and that is one reason why calculi have been and are regarded as a direct cause of ulceration.

There is, according to Aschoff, no evidence that a primary chronic appendicitis exists; the cases described as such probably are acute inflammations in process of healing; and the so-called physiologic obliteration of the appendix, on which stress has been laid, is also denied because all obliterations he studied were associated with changes indicating pre-existing inflammations.

As for the etiology of appendicitis, Aschoff, from his work, finds no evidence whatever in favor of acute appendicitis in the usual sense arising from hematogenous infection. Micrococcal emboli in the lymph follicles of the appendix occur only in pyemia, and the blood is said to be sterile in acute appendicitis. His tenet is that acute appendicitis originates from enterogenous infection of the mucous membrane at the bottom of furrows in the mucosa. If appendicitis develops after tonsillitis, which clinically there is reason to believe may occur, then the infecting germs probably are transferred to the appendix by way of the intestinal tract and not by way of the blood.

A JOURNAL OF PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS

We have just received the first number of a new journal, the *Journal of Pharmacology and Experimental Therapeutics*, edited, with the assistance of a number of associate editors, by J. J. Abel, the distinguished professor of pharmacology at Johns Hopkins University. This journal is devoted to the publication of original investigations in pharmacology, experimental therapeutics and closely related subjects. The publication of a journal of this character is a most encouraging indication of the rapid growth of pharmacology in this country. It is but comparatively recently that pharmacology has received recognition here as a separate branch of medical science. Both in the medical schools and in the government laboratories the work of the pharmacologist has been done by men who had no special preparation for the work—in the medical schools by clinicians, in the government laboratories by chemists.

Recently there has been a marked development in pharmacology in the United States. A number of medical schools have within the past two or three years established chairs of pharmacology; this movement has been stimulated to no inconsiderable extent by the revelations made by the Council on Pharmacy and Chemistry of the deplorable condition into which the manufacture and sale of drugs had fallen. It is with much gratification that we note the names of four members of the Council on the list of associate editors of this journal. The value of pharmacology has also been recognized by the United States government, which now maintains four well-equipped pharmacologic laboratories in charge of competent pharmacologists.

The spirit of pessimism concerning drug therapeutics which has been somewhat prevalent for some years is giving way to a sane optimism. Many are recognizing the truth of the statement made some time ago by Ehrlich, quoted in the editorial announcement of the present journal: "There can be no doubt that the three great fields of knowledge, pharmacology, toxicology and therapeutics, in their theoretical and practical aspects, form the most important branches of medicine."

The publication of a journal devoted to pharmacology and "experimental therapeutics"—which, after all, is only more or less immediately practical pharmacology—should stimulate further interest in this very important branch of science. The fact that among the associate editors are men eminent as clinicians as well as some of the leading professors of pharmacology and some of the pharmacologists engaged in public health work should give the new enterprise the cordial support of all interested in the advancement of medical science and practice.

WANTED—TRAINED NURSES FOR THE MIDDLE CLASSES

In addressing the graduates of a hospital training school a physician recently departed a little from the usual line of eulogistic remarks about the beneficent and important functions of the trained nurse, and offered some suggestions which are worthy of consideration. The fees of the trained nurse, he said, have been pretty solidly established at a figure that, while within the reach of the well-to-do, is so high as to be almost prohibitive to the great middle class. The very rich can take care of themselves; the very poor are well provided for through various organizations; but the great class of persons whose incomes are not much more than sufficient for their necessary expenses in the style of life which they have to maintain, can not bear, for any length of time at least, the expense of a trained hospital nurse. In such cases the attending physician often has to forego his fee in order that proper nursing may be had. The physician's suggestions are: first, that the last six months of the nurse's training be spent in work outside of the hospital and that a moderate fee, say twelve or fifteen dollars a week with or without bed and board, be charged for such services. Let this money all be paid either to the hospital or the nurse, or let it be divided between them, and let this outside work be supervised by the head nurse of the training school, who should visit the patient at short intervals and offer such suggestions as are necessary. In this way the nurse is given some valuable practical experience and people of so-called moderate means can secure competent nursing for what is to them a possible compensation. This would not reach all classes which would require and deserve attention. A man trying to rear a family on a hundred dollars a month could hardly afford to pay out one-half

or two-thirds of his salary as nurse's fees for many weeks, but it would be better than the present condition of things. The second suggestion was that certain nurses should establish a practice of going out to nurse by the hour, a plan already in practice in certain cities and one that needs to be more generally known and systematized. A third suggestion was that hospitals should graduate three grades of nurse, according to the length of time of training, distinguished by different badges and diplomas and their fees be graded accordingly, those who have had the least training charging the least. As a lay paper says, this last scheme is a little more doubtful, and it applies to it Gresham's law of bad money driving out good money; the high-priced nurse might find herself short of work while her cheaper sisters were busy. Perhaps, the nursing profession can hardly be expected to be as altruistic as the medical profession, but something should be done for the better treatment of the great middle class who constitute the greater part of the real worth of any country and have necessarily to bear the greater part of its burdens.

A HEALTHY TROPICAL SERVICE

Campaigning in the tropics will not be the perilous occupation hereafter that it has been in the past, according to Major General Barry's statement that the soldiers under his command in Cuba had a much lower non-effective rate than troops stationed in the United States. It must be remembered, however, that his men were regulars. An equal force of volunteers taken fresh from civil occupations would probably show a less favorable figure with two and a half years' residence in a climate so different from that to which they had been accustomed. Admitting this, however, a repetition of the experience of the Cuban war would hardly be expected.

We have learned a great deal in the last eight or nine years, both from our own experience and from the results of the Japanese war, as regards army sanitation. Colonel Gorgas' address published in our last issue has shown how a much larger army than that of General Barry, and of non-combatants, can endure hard work in the tropics and yet preserve its health. His opinion that the tropics will become the centers of future civilizations may not be altogether accepted. It is yet many years, perhaps centuries, ahead of us, but we can not discount its possibility, as would have been done by almost every one a very few years ago. There are some who believe with Dr. Woodruff and others that the tropics are deadly to the best development of the white race, but the possibility of white men becoming acclimated to the hot portions of the earth seems much nearer now than in the past.

Another Medical School for China.—It is proposed to build and endow an institution in China modeled after the Harvard Medical School, to be administered in this country by a board of trustees which includes ex-President Eliot and other eminent Harvard men. While independent of all religious or missionary control it will supplement with the best scientific instruction the hospital work now carried on by missionary physicians, who have laid broad and deep foundations in that empire for the study and practice of medicine.

Medical News

ARKANSAS

New Members of State Board.—The governor, on June 1, appointed the following members of the State Medical Board of the Arkansas Medical Society: Dr. Frank B. Young, Springdale, to succeed Dr. George V. Poyner, Green Forest; Dr. William S. Stewart, Pine Bluff, to succeed Dr. Vernon MacCammon, Arkansas City; and reappointed Drs. Fred T. Murphy, Brinkley, and James C. Wallis, Arkadelphia.

Personal.—Dr. H. N. Street has been elected assistant professor of gynecology and pelvic surgery, and Dr. George H. Martindale, Hope, has been elected professor of theory and practice of medicine in the College of Physicians and Surgeons, Little Rock.——Dr. Clinton P. Merriwether, Little Rock, has been elected secretary of the board of trustees of the Arkansas Tuberculosis Sanatorium. Drs. George S. Brown, Conway, and Jefferson D. Southard, Fort Smith, are also members of the board.——The recently organized Lawrence County Board of Health consists of Dr. John E. Pringle, Hoxie, president; Dr. John C. Hughes, Walnut Ridge, secretary; and Dr. William J. Robinson, Portia.

ILLINOIS

Personal.—Drs. George W. Boot, Evanston; Samuel M. Wylie, Paxton; John F. Page, Eureka; William B. Peck, Freeport; and Thomas H. Wagner, Joliet, have sailed for Europe. ——Dr. Joseph Robbins, Quincy, is still seriously ill in Blessing Hospital.

Golden Jubilee Celebrated.—Champaign County Medical Society, on June 26, celebrated its golden jubilee, at which two of the charter members of the society were present, Drs. Hartwell C. Howard, Champaign, and John T. Miller, Urbana. The society was organized March 4, 1859.

Hospital Notes.—About $3,000 was cleared for the proposed Lake Forest Hospital for Contagious Diseases at the annual horse show, July 2 and 3.——The new addition to St. Joseph's Hospital, Bloomington, recently erected at a cost of about $75,000, was opened for public inspection June 19 and 20. The addition includes about seventy rooms and wards.——The Hospital Aid Society of Monmouth, at its session June 16, voted $1,000 to the building fund.——The Jewish Consumptive Relief Society dedicated its building for female patients, June 27. The building has been presented to the Chicago-Winfield Tuberculosis Sanatorium, and will accommodate 10 patients.

Chicago

Personal.—Dr. and Mrs. E. Wyllys Andrews, Dr. and Mrs. Nathan S. Davis and family, Dr. Edmund J. Doering, and Dr. Edward Luehr have gone to Europe.——Dr. Anton G. Carlson has been appointed professor of physiology and Dr. H. Gideon Wells, professor of pathology in the University of Chicago.—— Dr. Albert J. Ochsner has been elected president of the Wisconsin University Alumni Association.

Extermination of Flies.—The Department of Health of Chicago has issued an illustrated poster entitled "Speaking of Flies!" the text of which is four-fold, and is as follows:

"Don't allow flies in your house."
"Don't permit them near your food—especially milk."
"Don't buy foodstuff where flies are tolerated."
"Don't eat where food has been exposed to flies."

The poster sets forth the dangers due to flies, what to do to get rid of flies, and how to eliminate the breeding places of flies.

INDIANA

Found Not Guilty.—Dr. George E. Snearly, Roann, charged with having poisoned his wife, has been exonerated, as the autopsy disclosed no poison. It is stated that the prosecution was the result of malice or meddlesome gossip.

May Disease and Deaths.—The order of disease prevalence for May was rheumatism, tonsillitis, bronchitis, measles, influenza, pneumonia, diarrhea, pleurisy, scarlet fever, whooping cough, intermittent fever, remittent fever, typhoid fever, and diphtheria. There were 2,793 deaths, equivalent to an annual death rate of 12 per 1,000. The deaths of children under one year of age numbered 341, and the deaths of those 65 years old and over, 867. Tuberculosis caused 384 deaths; typhoid fever, 35; diphtheria, 5, and smallpox, 1 death.

Commencement.—The commencement exercises of the Indiana University School of Medicine were held in Bloomington, June 23. President David Starr Jordan of Leland Stanford, Jr., University, Palo Alto, Cal., an alumnus of the college, delivered the address of the occasion on "The Burbanking

V 53
1909

of the Human Race." A class of 64 was graduated. The election of officers of the Alumni Association resulted as follows: Dr. Frederick R. Charlton, Indianapolis, president; Dr. Leslie Maxwell, Indianapolis, vice-president; and Dr. J. Don Miller, Indianapolis, secretary-treasurer.

Personal.—Dr. Harry C. Sharp, formerly surgeon of the Indiana State Reformatory, Jeffersonville, has been appointed a trustee of that institution.——Dr. J. William McKinney, Bluffton, who suffered from appendicitis at Atlantic City, N. J., June 11, and was operated on in the German Hospital, Philadelphia, is reported to be doing well.——Drs. George D Kahlo, French Lick, and Herbert T. Wagner, Indianapolis, have gone abroad.——Dr. Charles J. Overman has been elected secretary of the board of health of Marion.——Dr. J. Preston Christie has succeeded Dr. Edgar F. Kiser, resigned, as superintendent of the Indianapolis City Dispensary.

IOWA

Abolishes Public Drinking Cups.—The Iowa Central railroad, in accordance with the wishes of the State Board of Health, has abolished public drinking cups on all its trains. Water will be provided but passengers must furnish their own cups.

Graduation Exercises.—The Sioux City College of Medicine graduated a class of six, May 25. The address was delivered by W. L. Harding and the diplomas were presented by Dr. Frederick E. Franchere, president of the college. The college will open for its fall term in a new location nearer the center of the city.

Society Meeting.—At the semi-annual meeting of the Iowa Medical Society, held in Iowa City, June 22, Dr. Hugh T. Patrick, Chicago, gave a clinical demonstration of the differential diagnosis of organic and functional diseases of the nervous system; Dr. Joseph C. Beck, Chicago, gave a clinic on diseases of the ear, nose and throat; Dr. James R. Guthrie, Dubuque, gave a gynecologic clinic; and Dr. John B. Kessler, Iowa City, a clinic on skin diseases. The following officers were elected: Dr. Alexander Crawford, Mount Vernon, president; Dr. John B. Kessler, Iowa City, vice-president; Dr. Frederick G. Murray, Cedar Rapids, secretary; Dr. George P. Carpenter, Cedar Rapids, treasurer, and Drs. Lawrence W. Littig, Iowa City, Edwin Burd, Lisbon, and Frank S. Skinner, Marion, censors.

Personal.—Dr. William W. Bowen, Fort Dodge, is a patient in a Philadelphia hospital on account of an accident to his eye.——Dr. Charles F. Smith, Des Moines, has been elected a member of the board of trustees of Drake University.——Dr. Benjamin E. Eversmeyer has been selected as health officer of Muscatine.——Dr. Edward E. Blythe, Reinbeck, formerly a member of the medical faculty of the University of Iowa, sustained severe injuries to the face and eyes by an explosion of gasoline.——Dr. Charles S. Grant, Riverside, has been appointed surgeon of the Fifty-fourth Infantry, Iowa N. G., with rank of major, and Dr. Donald Macrae has been appointed assistant surgeon of the Fifty-sixth Infantry with rank of captain.——Dr. and Mrs. Lawrence W. Littig, Iowa City, have returned from Europe.

MARYLAND

Medical Care for National Guard.—At the encampment of the Maryland National Guard to be held at Westminster, July 18-25, systematic medical care is to be provided. A field hospital is to be established and hospital corps arrangements will be consolidated. Each regiment will have a dispensary for treatment of minor cases, the more severe cases being taken to the field hospital, which will have a capacity for 12 patients. Strict sanitary inspections will be made. Major Alexius W. McGlannan, brigade surgeon, N. G. Md., will have charge of these arrangements.

Expert Testimony Bill.—At a meeting of the Maryland Psychiatric Society, held June 30, the "Expert Testimony" bill prepared by the Baltimore Bar Association for presentation to the next legislature was discussed by members of the association and physicians. The bill provides that the judge shall appoint experts and fix their fees, and they will therefore possess official standing and not be so likely to be partisans. The expert, after investigation, is to submit to each counsel a written report before testifying. A committee of three physicians was appointed to confer with a like committee from the bar association on the parts of the bill at which physicians and lawyers are at variance.

Baltimore

Personal.—Drs. Robert M. Beech, Arthur S. Lovenhart, and William Green have sailed for Europe.——Dr. H. Warren Buckler will be resident physician at Jamestown, R. I., for the summer, and Dr. John A. Luetscher, resident physician at Ocean City, Md.——Dr. Irving J. Spear has been appointed clinical professor of neurology and psychiatry at the University of Maryland.

MASSACHUSETTS

Carnation Day.—The Lynn Tuberculosis Committee announces a net profit of $2,056.41 from the sale of carnations on Carnation Day, which will be applied toward the establishment of a day camp for tuberculosis.

Floating Hospital.—The Boston Floating Hospital made its first trip for the season June 30. A bronze tablet has been placed at the entrance of the boat acknowledging the services of Rufus B. Tobey, founder of the Boston Floating Hospital.

Hospital Buys Land.—The Massachusetts General Hospital has purchased all of the land of the Parkman estate, lying between the hospital on the north, North Anderson street on the east, Cambridge street on the south, and North Grove street on the west, at a cost of more than $166,000.

MICHIGAN

Commencement.—The forty-first annual commencement exercises of the Detroit College of Medicine were held May 27. The faculty address, "The Road to Success," was delivered by Dr. J. Henry Carstens, and Dr. Ernest L. Shurly presented the diplomas.

Dangerous Communicable Diseases.—During May, there were reported in the state, 161 cases of pneumonia, 102 cases of typhoid fever, 159 cases of diphtheria, 34 cases of meningitis, 75 cases of whooping cough, 287 cases of scarlet fever, 1,216 cases of measles, and 70 cases of smallpox.

Personal.—Dr. and Mrs. Ovidus A. Griffin, Ann Arbor, sailed June 19, for Europe.——Dr. Harry W. Long has qualified as health officer, and Dr. John O. Groos, as city physician of Escanaba.——Dr. Perry Schurtz has been elected chief of staff, Dr. Robert J. Hutchinson, vice-chief, and Dr. Christian Vander Veen, secretary of the medical staff of Butterworth Hospital, Grand Rapids.——Dr. George H. Voelkner has been appointed a city physician of Detroit.——Dr. John W. Hoffman, in charge of the hospital work of Detroit, has resigned.

Vital Statistics for May.—During May, there were 3,117 deaths reported, equivalent to an annual death rate of 14.2 per 1,000. Of these 518 were of infants under one year of age, 193 of children from one to four inclusive, and 1,007 of individuals sixty-five years of age and over. Among the important causes of deaths were tuberculosis, 251; pneumonia, 218; violence, 165; cancer, 134; measles, 49; influenza, 46; enteritis of infants, 40; typhoid fever, 34; meningitis, 27; diphtheria and scarlet fever, each 26, and whooping cough, 22. Three deaths were reported from tetanus during the month.

NEW JERSEY

Sanitarium Opened.—The North American Sanitarium for Convalescent Children opened for its eighth season at Atlantic City, June 21. It is announced that this year the sanitarium will devote its attention to the care of cases of tuberculous diseases of childhood.

Vital Statistics for May.—During the month ended May 15, 2,955 deaths were reported in the state, a decrease of 378 from the previous month. Of the deaths, 505 were of infants under 1 year of age, 324 of children between 1 and 5 years of age, and 883 of individuals 60 years old and more. Chief among death causes were tuberculosis, 390; pneumonia, 375; diseases of the circulatory system, 345; diseases of the nervous system, 316; diseases of the respiratory system, 252; nephritis, 213, and cancer, 132. Of the communicable diseases, diphtheria caused 56 deaths; scarlet fever, 45; measles, 34; whooping cough, 27, and typhoid fever, 14.

State Society Meeting.—The one hundred and forty-third annual meeting of the Medical Society of New Jersey was held in Cape May, June 22-25, under the presidency of Dr. David St. John, Hackensack. The following officers were elected: President, Dr. Benjamin A. Waddington, Salem; vice-presidents, Drs. Thomas H. Mackenzie, Trenton; Daniel Strock, Camden, and Norton L. Wilson, Elizabeth; corresponding secretary, Dr. Harry A. Stout, Wenonah (re-elected); recording secretary, Dr. William J. Chandler, South Orange (re-elected); treasurer, Dr. Archibald Mercer, Newark (re-elected), and councilors, Drs. Thomas W. Harvey, Orange; Edward F. Denner, Paterson; William A. Clark, Trenton; William H. Izard, Camden, and James Hunter, Westville, and delegates to the American Medical Association, Drs. Claudius R. P. Fischer, Bound Brook; Alexander Marcy, Riverton, and Luther M. Halsey, Williamstown. It was decided to hold the next annual meeting in Atlantic City.

NEW YORK

New York City

Personal.—Coroner Robert F. McDonald of the Bronx was seriously injured in an automobile accident.——Dr. and Mrs. S. Oakley Vanderpoel; Dr. and Mrs. Samuel E. Getty, Yonkers; Dr. and Mrs. M. Allen Starr, Dr. and Mrs. Walter F. Chappell and Dr. and Mrs. Russell S. Fowler have sailed for Europe.

Junior Seabreeze Open.—The Rockefeller Summer Hospital for Babies, managed by the New York Association for Improving the Condition of the Poor, has been opened. One feature of the work will be the daily conference for mothers at which the nurses will instruct mothers in the proper care of their babies.

Anti-Noise Ordinance Passed.—An ordinance has been passed and awaits the signature of the mayor, which provides that no peddler, vendor or huckster shall blow any horn or other instrument or make any improper noise tending to disturb the peace and quiet of a neighborhood for the purpose of directing attention to his wares. The penalty is to be not more than $5 for each offense.

Lowest Death Rate Since 1860.—The death rate for New York City for the first six months of 1909 is lower than it ever has been since 1860. The death rate in 1904 was 22.08; in 1905, 19.04; in 1906, 18.88; in 1907, 18.99; in 1908, 17.59, and in 1909, 16.92. In 1904 there were 210 deaths from typhoid fever, but only 169 in 1909. There has, however, been a notable increase in the number of deaths from organic heart disease. In 1904 there were 2,656 deaths from cardiac disease and 3,673 in 1909. This year there have been 84 more deaths from sunstroke than in all four of the preceding years.

OHIO

Personal.—Dr. Robert C. Longfellow, Toledo, has been appointed consulting clinical bacteriologist of the volunteer staff of the Ohio Sailors' and Soldiers' Home Hospital, Xenia.——Dr. Ora O. Fordyce has succeeded Dr. O. H. Rorick, resigned, as superintendent of the Athens State Hospital.——Dr. Hugh A. Baldwin, Columbus, returned from Europe June 13.——Dr. Henry C. Schoepfle has been reappointed health officer of Sandusky.

Ill and Injured.—Dr. Milton S. Williamson, Findlay, who has been ill with pneumonia and pleurisy, is reported to be improving.——Dr. Francis M. Michael, N. Eaton, is reported to be critically ill.——Dr. Hugh G. Campbell, Logan, is reported to be seriously ill in Grant Hospital, Columbus.——Dr. James A. Sherbondy, Youngstown, was operated on in the City Hospital for appendicitis, June 16.——Dr. William D. Deuschle, Columbus, is suffering from a badly contused shoulder, the result of an automobile accident.

Cincinnati

Want New College Buildings.—Arguments were made before the city council for a large bond issue for university purposes. Nearly $300,000 was asked for new medical buildings which have become an imperative necessity since the merger of the Ohio and Miami Medical colleges.

Commencement.—Under the auspices of the University of Cincinnati, the Medical College of Ohio and Miami Medical College graduated their last separate classes, June 16, the former institution issuing diplomas to 31, and the latter to 17.

Dr. Phelps Honored.—Dr. Albert T. Phelps, who recently resigned as secretary and as a member of the faculty of the Medical College of Ohio, was given a complimentary dinner by the faculty, alumni and students, June 2. Dr. Joseph Ransohoff acted as toastmaster. Dr. Paelps has declined the position of dean of the merged colleges and expects to enter practice in Watch Hill, R. I.

Alumni Association Merged.—On June 4, the first banquet of the combined alumni of the Ohio and Miami Medical Colleges was held, with over 200 in attendance. The following officers were elected: President, Dr. E. Otis Smith; vice-presidents, Drs. Walter Griess and Charles A. Langdale; secretary, Dr. Charles E. Iliff; treasurer, Dr. W. H. Streitmann, and executive board, Drs. W. H. Campbell, H. V. A. Spargus, Robert W. Bledsoe, Sidney Lange, Frederick W. Lamb and Clement C. Fihke.

Personal.—Dr. Julius C. Stammel has been appointed resident physician of the Boys' Industrial Home, Lancaster, O.——Dr. Horace J. Whitacre was thrown from an automobile, June 1, and sprained his wrist.——Dr. Sidney Lange has been appointed radiographer on the staff of the Cincinnati Hospital.——Dr. William Muhlberg has been added to the faculty of the department of medicine, and Dr. S. P. Kramer to the faculty of the department of surgery in the Ohio-Miami Medical College.——Drs. John M. Withrow, Miriam Schaar and Dr. Christian R. Holmes have gone abroad for the summer.

PENNSYLVANIA

Advisory Health Board Appointed.—On June 30, Governor Stuart appointed the following members of the advisory board of the State Department of Health: Drs. Leonard Pierson and Charles E. B. Penrose, of Philadelphia, Dr. Adolph Koenig, Pittsburg; Dr. George W. Guthrie, Wilkesbarre; B. Harry Warren, West Chester, and Lee Masterton, Johnstown.

Philadelphia

Old Municipal Hospital Empty.—The last of the patients in the old Municipal Hospital, comprising 87 children suffering with diphtheria and a convalescent smallpox patient, were removed, June 30, to the new institution.

Personal.—Drs. Wharton Sinkler, J. M. Godfrey, C. Sigmund Raue, Burton A. Randall and Gordon M. Christine, have sailed for Europe.——Dr. James M. Anders has been made an officer of l'Instruction Publique by the French government.——Drs. George Woodward, William W. Keen and John H. Musser have been appointed trustees of the newly organized Philadelphia Bureau of Municipal Research.——Dr. Benjamin B. Wilson was thrown from his carriage, June 30, and seriously injured.

Bequests.—The will of the late Mrs. Julia D. Stroud bequeaths $15,000 to the Eliza Cathcart Home for Incurables.——The will of the late Harry S. Henry directs that at the death of his wife and sisters, his estate shall be divided in equal portions among the following institutions: Hospital of the University of Pennsylvania, the Hospital of the Protestant Episcopal Church of Philadelphia, the Presbyterian Hospital and the Board of Managers of the Contributors to the Pennsylvania Hospital, share and share alike for the establishment and maintenance in each of the said hospitals of a ward to be known as the H. S. Henry ward for the treatment of white children only.

Psychologic Clinic.—Mentally and morally defective children are to be examined at the new physiologic clinic which opened at the University of Pennsylvania, July 7. Clinics will be conducted daily, except Saturdays and Sundays, until August 17. Parents may have children examined free and courses of education and treatment will be advised or parents will be directed to the proper institutions for training and treatment. The clinic will be under the direction of Dr. Arthur Holmes, instructor of psychology in the university, assisted by Dr. Seymour P. Ludlum, instructor of neurology and neuropathy, Dr. William Burdick, Dr. Clara H. Town, psychologist at the Friends' Asylum for the Insane, and Dr. Stevenson Smith.

Dispensary for Epileptics.—A few months ago as the result of papers read before a local medical society and the Presbyterian Ministerial Association of Philadelphia, "The Society for the Securing of Suitable Employment for Epileptics" was formed. It is estimated that there are at least 2,000 epileptics in Philadelphia alone, and as yet there is no institution for the exclusive and special oversight of these patients where they may be treated without leaving home and while at their daily avocations and where, at the same time, efforts are being made to secure suitable work for the unemployed, so that accidents consequent on sudden seizures may be prevented. The Letchworth Clinic for the Home Treatment of Epileptics has been formed, and together with the society first named will study the means for the prevention and care as well as cure of epilepsy, and will establish a propaganda for the enactment of a law prohibiting the marriage of epileptics until at least three years after recovery. The medical staff of this important charity is composed of Drs. Matthew Woods, J. Madison Taylor, John H. Rhein, Charles E. deM. Sajous and William M. Clapp.

Filtration Reduces Typhoid Fever.—The report of the director of health for the first six months of this year shows a marked diminution in typhoid fever, and the cause of this change is attributed by the health authorities to the use of filtered drinking water. The total number of cases of typhoid reported since January 1 aggregates 1,383, as compared with 2,195 cases reported during the corresponding six months of last year, a decrease of 812 cases. The figures for the first half of this year are still more marked by comparison with those for the first six months of 1907, when 5,005 cases were reported or 3,632 more than occurred this year. Based on the number of cases for the current six months, it is estimated that the total number of cases this year will not exceed 2,000, or 80 per cent. less than the number reported in 1906. In that year there were 9,721 cases reported, and at that time only a small section of the city was receiving filtered water. The following year, with the extension of the filtered water supply, the number of cases was reduced one-third, and by a further extension

V 53
1909

of the filtered water last year another decrease of 40 per cent. was made. With the exception of parts of the four wards, which still receive raw water, the whole of the city has been receiving filtered water since March 1. The reduction of the cases in typhoid may be further illustrated by the fact of the early months of 1906, when the weekly number of cases of typhoid fever was from 300 to more than 400. For the week ended June 26, only 17 cases were reported. In the week preceding 22 cases were reported, and in the week prior to that 15 cases, the smallest number in the history of the Bureau of Health. The mortality from typhoid fever has correspondingly decreased from 606 in 1907 to 351 in 1908 and 205 (estimated) in 1909.

TEXAS

Commencement.—The medical department of the University of Texas held its eighteenth annual commencement exercise, May 29, when a class of 37 was graduated. Dr. William Keiller delivered the faculty address, and the diplomas were presented by President Mezes of the university.

State Medical Board Re-election.—At the annual meeting of the State Medical Examining Board, held in Cleburne, the following officers were re-elected: President, Dr. James D. Osborne, Cleburne; vice-president, Dr. John D. Mitchell, Fort Worth, and secretary, Dr. Marquis E. Daniel, Honey Grove.

Personal.—A banquet, followed by a smoker, was tendered Dr. Charles M. Rosser by the medical fraternity of Dallas, June 5.——Dr. Paul Renger has been appointed health officer of Hallettsville.——Dr. George W. Larendon, city health officer of Houston, has been appointed a state health officer.——Dr. John F. Y. Paine has resigned as professor of obstetrics and gynecology in the State Medical College, Galveston.——Dr. David Berry, San Antonio, has been appointed physician of Bexar county.

Ruling on Osteopathy.—The Court of Criminal Appeals holds that the practice of osteopathy is healing the sick and the practice of medicine, thereby bringing osteopathic practitioners under the provision of the state medical act. It was so found in the case of Ira W. Collins, El Paso, charged with failure to secure license to practice medicine in Texas, who instituted habeas corpus proceedings, but was remanded to the custody of the sheriff, and this action was sustained by the court of appeal.

State Board of Health Named.—The governor, on May 21, named the six physicians who, with Dr. William M. Brumby, Houston, state health officer, will compose the State Board of Health: Drs. Hatch W. Cummings, Hearne; Jacob E. Gilcrest, Gainesville; John W. Burn, Cuero; M. H. E. Whitesides, Timpson; Thomas F. Burnet, Seymour, and Boyd Cornick, San Angelo.——Dr. Edward B. Parsons, Palestine, has been appointed a member of the State Board of Health, vice Dr. M. H. E. Whitesides, Timpson, resigned on account of ill health.

WASHINGTON

New Hospital.—Dr. Frank H. Collins has opened a new hospital in Goldendale, which has accommodation for 15 patients.

Secures Damages from Physician.—The jury in the case of Leslie Lamb versus Dr. Charles P. Thomas, Spokane, in which damages were sought on account of the alleged leaving of a roll of gauze in an operation wound, is said to have found for the plaintiff, June 18, and to have assessed the damages as $889.

Personal.—Dr. Philip Frank, North Yakima, has succeeded Dr. Thomas Tetreau as health officer of Yakima county.——Dr. Wilbur W. MacKenzie, Spokane, fractured his right wrist while cranking his automobile, June 18.——Dr. Alice Hall Chapman, Woodland, seriously injured her left hand, June 15, by the explosion of a gopher gun which she was placing in position.——Dr. W. L. Ludlow, Seattle, has resigned as physician of King county.——Dr. James A. LaGasa, city bacteriologist of Tacoma, has been appointed health officer, vice Dr. Spiro Sargentitch, resigned.——Dr. Hilbrand J. Hards has been chosen city bacteriologist of Tacoma.

WISCONSIN

Will Direct Pasteur Institute.—Dr. Mazyck P. Ravenel, director of the State Hygienic Laboratory, Madison, will, it is said, be placed at the head of the Wisconsin Pasteur Institute recently established in connection with the state laboratory.

New Hospital.—The Knowlton Hospital, Milwaukee, has been sold to a Milwaukee syndicate which proposes to enlarge it and carry it on as a non-sectarian institution. The incorporators have chosen "Columbia Hospital" as the name of the institution.

Exaggeration.—Dr. Marshall Surenson, Viroqua, whose death was announced in the March 13 issue of THE JOURNAL, writes asking the correction of the item, as he is "not dead yet." The information was derived from the *Wisconsin Medical Journal* for January.

Graduation Exercises.—At the annual graduation exercises of the Wisconsin College of Physicians and Surgeons, Milwaukee, May 27, a class of 15 received diplomas from the dean of the faculty, Dr. A. Hamilton Levings. The doctorate address was delivered by President Wilbur O. Carrier of Carroll College.

Personal.—Dr. and Mrs. Lewis J. Daniels, Milwaukee, sailed for Europe, June 10.——Dr. Lawrence P. Mayer, Hudson, who has been seriously ill with septicemia in St. Paul, is convalescent.——Dr. William A. Gordon, Oshkosh, is reported convalescent.——Dr. Frank J. Pope has been chosen president of the board of health of Racine.——Dr. Frederick R. Hyslop has been elected health officer of Whitewater.

Medical College Affiliation.—Dr. Thomas C. Phillips has been appointed dean of the Wisconsin College of Physicians and Surgeons, the medical and dental departments of Carroll College.——On June 15 the trustees of Carroll College, at their annual meeting, voted unanimously to accept the proposition of the Wisconsin College of Physicians and Surgeons, Milwaukee, to affiliate with that institution.

GENERAL NEWS AND COMMENT

Carroll Fund Oversubscribed.—As more than enough money has been contributed to meet the needs of the committee in charge of the fund to pay for the home for the widow and children of the late Major Carroll, it is especially requested that no more subscriptions be made. The following amounts have been received since the last report:

Medical Officers, U. S. Army	$20.00
U. S. P. H. and M.-H. Service	10.00
Dr. W. H. Sharp, Parkersburg, W. Va.	1.00
Dr. Katharine R. Collins, Atlanta, Ga.	5.00
Dr. A. B. Nickel, San Francisco	5.00
	41.00
Previously acknowledged	8,196.31
Total	$8,237.31

Interstate Association Meeting.—The sixth annual meeting of the N. S. Davis District Medical Association, whose territory includes parts of Iowa, Illinois and Missouri, will be held in Keokuk, Iowa, July 13, under the presidency of Dr. Elmer E. Sherman, Keosauque, Iowa.

Neurologists Elect Officers.—At the annual meeting of the American Neurological Association, held in New York City, May 27-29, the following officers were elected: President, Dr. Morton H. Prince, Boston; vice-presidents, Drs. John K. Mitchell, Philadelphia, and Herman H. Hoppe, Cincinnati; secretary-treasurer, Dr. Alfred R. Allen, Philadelphia, and councilors, Drs. Charles L. Dana, New York City, and James J. Putnam, Boston. The next meeting will be held in Washington.

Transportation of Lepers.—An amendment to the interstate quarantine regulations has been issued by the Public Health and Marine-Hospital Service, which provides that lepers may be accepted for transportation under proper supervision when en route to seaport of deportation, also for transportation to a designated place for care and treatment, with the necessary consent of the proper health authorities, provided proper sanitary regulations are enforced with regard to the leper en route to destination.

CANADA

Gift to McGill.—Lord Strathcona, Canadian High Commissioner in London, has given half a million dollars to McGill University. Of this amount, $450,000 is to be used for completing the new medical building, and the balance for the augmentation of salaries of the faculty.

Personal.—Drs. Ridley McKinzy and Thomas G. Roddick, Montreal, will spend the summer in Europe.——Dr. and Mrs. William B. Thistle, Toronto, are taking a trip to Seattle and the Pacific coast.——Dr. Robert M. Coulter, Ottawa, deputy postmaster general of the Dominion, has returned from a trip to Australia and New Zealand.——Dr. Benjamin G. Bourgeois has been appointed house surgeon of Notre Dame Hospital, Montreal.

Hospital Notes.—The Montreal Maternity Hospital has urgent need of funds for its current expenses of about $2,000 per month. The May deficit amounted to $1,200. Friends have recently contributed $1,600 to defray current expenses.——The sum of $75,000 is needed by the board of management of the Royal Columbian Hospital, New Westminster, for the erection of new buildings, rendered necessary by the constantly increasing number of inmates in the present institution.——Dr.

Lorne McGibbon, Montreal, has given $125,000 for the erection and equipment of a sanatorium for tuberculosis at St. Agathe in the Laurentian mountains.

Provincial Medical Association Meets.—The first annual meeting of the Manitoba Medical Association was held in Brandon, June 22 and 23. It was unanimously decided to affiliate with the Canadian Medical Association. The following officers were elected: President, Dr. W. Harvey Smith, Winnipeg; vice-presidents, Drs. Harvey E. Hicks, Griswold, and John S. Matheson, Brandon; honorary secretary, Dr. Jasper Halpenny, Winnipeg; honorary treasurer, Dr. Robert F. Rorke, Winnipeg; executive committee, Drs. Henry A. Wright, Oak Lake; F. S. Keele, Portage LePrairie; Daniel G. Ross, Selkirk; Harry M. Speechly, Pilot Mound, and William J. Harrington, Dauphin, and auditors, Drs. Robert J. Blanchard and Arthur W. Moody, Winnipeg. The 1910 meeting will be held in Winnipeg.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, June 26, 1909.

The Darwin Centenary

The centenary of the birth of Charles Darwin has been celebrated at Cambridge University in a unique manner worthy of the great biologist. Festivals have been held at this ancient seat of learning to celebrate the foundation of some great institution in the distant past or in honor of some great name which has become historic. But no such tribute has been paid to any man within so short a period of his death. Over two hundred universities, academies and learned societies at home and abroad sent delegates to the celebration. The whole biologic world was represented. Thirty institutions in the United States were represented. Darwin's old college (Christ's) was a sort of shrine to which the delegates made pilgrimages. The rooms once occupied by him were open to the visitors and an exhibition of portraits, books, specimens and other objects of interest in connection with Darwin was organized. The latest addition was a large bust in bronze, executed by an American artist and presented by the American delegates. Among the British delegates were Darwin's sons, Sir George Darwin, Mr. Francis Darwin, Major Leonard Darwin and Mr. William E. Darwin, all of whom are distinguished scientists.

A Diploma in Ophthalmology

The University of Oxford has made an innovation in medical diplomas by instituting a special diploma in ophthalmology. The advisability of this step is questioned, as it is thought that it is carrying specialism too far. The question is asked, if there is to be a special diploma in ophthalmology, why not one in laryngology, otology, dermatology, etc.?

A New Departure in the Treatment of Ophthalmia Neonatorum

At St. Paul's Hospital for Diseases of the Eye and Ear, Liverpool, a new departure has been made in the treatment of ophthalmia neonatorum which has given excellent results. As this disease is one of the most fruitful causes of blindness, the hospital authorities have decided to endeavor to prevent this dread result. A special ward is set apart for the accommodation of children suffering from the disease as well as for their mothers. It contains four beds and four cots. Thus while the children have all the advantages of hospital treatment, the evil of separating them from their mothers soon after birth is avoided. A necessary condition for the success of the scheme is the fact that midwives are required, under a penalty, immediately to notify the health officer of all cases of discharge from the eyes in new-born children. In the first year the number of cases treated numbered 75 and in the first eighteen weeks of the present year, 53.

A Crew Disabled by Beri-Beri

The Norwegian bark *Lalla Rookh* arrived in Newport after a terrible experience on a voyage from Para, Brazil. Of a crew of 13 only 2 escaped an attack of beri-beri. All went well until the vessel left French Guiana on May 8. Soon members of the crew became ill and on June 1 it was discovered that the disease was beri-beri. On June 3 the carpenter died and day by day one man after another fell ill. At one time 6 out of the 13 men were in bed. Some partially recovered. Both the captain and the mate were attacked. At one stage the captain and one man worked one watch and the mate and two men another. Upon arrival only 7 men were on duty; the remainder were removed to a hospital, where two are in serious condition.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, June 24, 1909.

Congress on Gynecology, Obstetrics and Pediatrics

The sixth session of the National Congress of Gynecology, Obstetrics and Pediatrics will be held at Toulouse Sept. 22-27, 1910, under the presidency of Professor Kirmisson of Paris, president of the section of pediatrics. The president of the section of gynecology is Professor Hartmann of Paris, and the president of the section of obstetrics is Professor Rouvier of Algiers. The committee of organization has chosen the following subjects for consideration: curable acute forms of pulmonary tuberculosis in infants; eczema of infants; vertebral osteomyelitis; pyloric stenosis of infants; megacolon; solid tumors of the ovary; relation of biliary lithiasis to pregnancy and labor; the pathogenesis and treatment of the pernicious vomitings of pregnancy.

Election of Dr. Schwartz to the Academy of Medicine

On June 15 the Academy of Medicine elected Dr. Schwartz, surgeon at the Cochin Hospital, a member in the section of surgical pathology in place of Dr. Chauvel, who died last December. Dr. Schwartz is about 57 years old; he is an *agrégé* of the College of Medicine and has published important works on operative medicine and external pathology.

The Practice of Radiography

The commission named by the Academy of Sciences to regulate the practice of radiography (THE JOURNAL, Jan. 16, 1909, lii, 224) has reported. It recommends that the medical or therapeutic application of radiography should be expressly forbidden to all except graduate doctors of medicine, but this restriction should not apply to laboratory researches solely for scientific purposes. The institution of a special examination in radiography at the College of Sciences is not recommended. The radiographer of the hospitals should be a physician and chosen in *concours*.

Increase of the Rate of Physicians' Fees

The medical society of the fourth ward or *arrondissement*, Paris, has recently resolved that, considering the increased cost of living for the last twenty years and the liberality with which free medical care is everywhere given, physicians' fees should also be increased and fees for visits should be raised by at least one-third over the present rates. Similar resolutions have been passed of late by other medical societies.

Health of French and German Armies Compared

A little more than six years ago an article in the *Kölnische Zeitung*, which commented unfavorably on the state of health of the French army, especially in comparison with the German army, aroused a discussion in the senate and created a great sensation throughout France. The report which Dr. Lowenthal, member of the extraparliamentary commission on depopulation, has made to the Academy of Medicine during its last session, will certainly create as deep an impression. Dr. Lowenthal has studied the condition of health of the French army for 1906, the last year for which the ministry of war has published the sanitary report and the first year in which the two-year military service law has been in force. Compared with that of 1905, which was itself unfavorable, the year 1906 shows an appreciable increase in cases of infectious diseases, such as typhoid fever, scarlet fever, cerebrospinal meningitis, scrofula, diphtheria and tuberculosis. Lowenthal believes this to be one of the effects of the new law for two-year service which enlists in the auxiliaries men unfit and useless for national defense, who merely increase the rate of military morbidity and mortality. Moreover, a constantly decreasing number of men pronounced good for active service is recorded. Lowenthal says that obsessed by a mania for numbers, we wish to maintain an army of the same size as Germany, in which the population is greater than ours and in which the number of births is increasing instead of falling off as with us. In 1908 the French army contained 582,000 men against the 572,000 of the German army, and in that same year the number of male births in Germany increased to 885,000 against 466,000 in France. Thus we maintain a superior number of standing forces, with a number of births 100 per cent. lower.

Taking account only of deaths by disease (7,578 in the French army against 3,400 in the German army), the sanitary condition of the French army is shown by a loss of 4,178 men more than in the whole of the German army. Moreover, thousands of invalids go home from the French army to die soon after their release from service; and others, incurably diseased, drag out a short and miserable existence.

V 53
1909

As remedies for this disquieting state of affairs, Dr. Lowenthal proposes the amelioration of the general sanitary condition of the country; the doubling of the number of the barracks, which are at present overcrowded; the sanitary improvement of the present barracks; the thorough reform of our system of recruiting; a reduction of enlistments (if it were reduced to about 100,000 men, the army would gain in quality what it would lose in quantity); and the military training of young men. This last question is uppermost in official circles, as I indicated in one of my preceding letters (THE JOURNAL, Dec. 26, 1908, li, 2226).

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, June 16, 1909.

Robert Koch Foundation Against Tuberculosis

Under the auspices of Prof. Kitasato there has been collected in Japan for the Koch foundation $2,300 (9,500 marks), a sum which, considering the scarcity of money in Japan, is a marked evidence of the esteem which Robert Koch enjoys in that country.

Personals

Pflüger, the famous Bonn physiologist, celebrated his eightieth birthday June 7. On this occasion the city of Bonn gave him the freedom of the city.

Professor Israel, the Berlin surgeon, was injured on his face and legs three days ago by being thrown to the pavement in jumping from his carriage, while the horse was running away. Fortunately, serious consequences will not result.

Vital Statistics of Prussia

The recently published vital statistics of Prussia for 1907 furnish some interesting data. The births were reduced by 10,621 and have fallen from 36.52 born living per 1,000 inhabitants in 1901 to 33.23. The death rate is low, however, 17.96 per 1,000 inhabitants. From this it results that in spite of the reduction in the birth rate the increase in population is greater than formerly.

To Check Overproduction in Medical Literature

The German Physiologic Association at its last session adopted the motion of Professor Abderhalden that the members should not support any new journals. This action will go far toward restraining the unnecessary multiplication of journals and overproduction of medical articles. Naturally, it applies only to physiologic literature, but it is to be hoped that the example of the physiologic association will be followed by other scientific societies and the restriction extended to the entire field of medical literature.

Opposition to the Insurance Bill

The imperial bill for regulation of industrial insurance has aroused most active opposition throughout the entire medical fraternity of Germany because physicians believe that it is entirely unsuited to remove the evils in the medical service of the *Krankenkassen*, but on the other hand is calculated to restrict more than formerly the independence of physicians. The leader in this fight against the imperial insurance law is the so-called Leipsic League. How this fight is to be carried on if the bill, in spite of protest, shall be adopted by the legislature, is shown by a declaration which the directors of the league have sent to all German physicians for their signature. According to this, each physician is to declare that it is his determination if the law is passed to have nothing to do with the *Krankenkassen* in case the present conditions for medical service or any equivalent ones receive legal sanction. Among other things, the physicians would not accept the prescribed right of election to the special institutions (the arbitration committee and arbitration chamber); they would not solicit appointments directly to the medical service of the new *Krankenkassen* which are to be established, but only through the medical organizations; also they would treat the members only as private patients at special rates, and they would give them no certificates for the *Krankenkassen*, etc. The final decision in this very important matter belongs to the German Medical Association (*Deutscher Aerztetag*) which holds its meeting at Lübeck within a week.

In case of disagreement between physicians and the *Krankenkassen* provision is made for two boards of arbitration, the arbitration committee (*Schiedsausschuss*) and the chamber of arbitration (*Schiedskammer*). Both of these boards are to have medical members who are to be elected, in the case of the arbitration committee by the physicians of the district and, in case of the chamber of arbitration, by the medical council.

Pharmacology

COLLARGOL

Schering & Glatz's Reply to the Report of the Council and the Rejoinder Thereto

REPORT OF THE COUNCIL ON PHARMACY AND CHEMISTRY

The letter of Schering & Glatz which is printed below is a reply to the Council's report on collargol published in THE JOURNAL, March 13, 1909. The letter having been submitted to the Council it was voted that it should be referred to the committee which prepared the collargol report with the request that it report to the Council whether or not the letter is pertinent and should be published in THE JOURNAL. The letter of Schering & Glatz having been transmitted, the committee recommend to the Council that the letter be published, also the rejoinder which appears below. This recommendation was adopted and in accordance therewith the matter is published.

W. A. PUCKNER, Secretary.

SCHERING AND GLATZ'S LETTER TO THE COUNCIL

Sirs:—We are glad to learn that your Chairman has, on further consideration, decided to submit to you, with our request for publication, our reply to the articles on collargol in THE JOURNAL, March 13, 1909. We shall here answer only the most important points raised by your committee.

COLLARGOL IN THE BLOOD STREAM

Kunz-Krause and Lange (*Therap. Monatsh.*, 1900, No. 10) by means of a method they specially evolved for the purpose, demonstrated collargol in the blood after 195 minutes. Beyer (*München. med. Wchnschr.*, 1902, No. 8) found traces of it in the blood after eight to ten hours. Our statement that collargol disappears from the blood within an hour did not mean that its disappearance was absolute within that time.

Hocheisen did find that collargol circulates in the blood as colloidal silver; he said (*Med. Klin.*, 1907, No. 33, case 27):

"Autopsy showed: endometritis gangrenosa, septic degeneration of the spleen, liver and kidneys; in spleen and kidneys septic infarcts. Recent ulcerative endocarditis of the aorta. Findings: on aortic valves, below the nodull, deposits of black and grayish-black coloration, or grayish-yellow, matted round structures. Microscopically these deposits proved to be crowded fields of streptococcus cultures mixed with small, bluish-black, irregularly formed scales and granules, *which were nothing else than collargol.*"

Van Waveren merely demonstrated the admitted fact that collargol is precipitated when added to a salt solution; but this is incompetent, since blood is no mere salt solution, over 7 per cent. albumen being present in the blood. Hamburger (*Arch. f. physik. Med.*, 1906, Nos. 2-3) refers to "colloid silver or collargol which has lately been recommended in bacteremias" and asks:

"How is it possible that it remains in colloidal state in the blood stream, when the blood contains so much salt and when—as already stated—salts precipitate colloids? This is due to the presence of other colloids, namely albumen."

Hamburger says, incidentally, that collargol solutions are less stable than Bredig's silver; but this referred to the old collargol. The collargol now supplied has added to it, in the course of manufacture, a little albumen, so that its solutions are very stable.

Klimmer (*Ztschr. f. Thiermedizin*, 1900, No. 8) said:

"If we did not add a substance to protect colloid silver from change by salt and hydrochloric acid, it would be precipitated by the salts of the blood and other animal fluids, and thereby virtually deprived of effectiveness."

His *in vitro* tests showed that gum acacia and albumen materially retard change of colloid silver by sodium chlorid, hydrochloric acid, lactic acid and trypsin. He also gave collargol *per os*, together with gum acacia and albumen, to a dog, and recovered 50 per cent. of the colloidal silver in the dog's feces.

If collargol were changed to salts in the body, it would be fatal in the enormous doses in which it is used. Cohn says:

"When such enormous doses do not cause the least disease phenomena, this proves with certainty that colloidal silver has no toxic effect on the organism. This behavior is all the more strange because, as is well known, metallic silver and its common salts (for instance silver nitrate) are exceedingly grave poisons which even in minimal doses can destroy that organism soon after introduction."

ABSORPTION OF COLLARGOL

The committee says:

"The fact that is repeatedly stated in articles referred to in Schering & Glatz's advertising matter, that colloidal silver, *because*

of its colloidal character does not pass animal membranes, contradicts the other contention that it passes the gastric or intestinal mucous membranes in colloidal form."

There is no contradiction whatever between the two facts referred to. It is an elemental law of physiology that the mucosæ absorb *by the activity of the epithelial cells* rather than by diffusion and endosmosis. Loebl did establish the fact that collargol enemata are absorbed. He says literally (*Therap. d. Gegenw.*, April, 1904):

"The collargol enema is almost entirely absorbed, for a cleansing enema given twelve hours later brings only a slightly blackish fluid."

Seidell (*Deutsch. med. Wchnschr.*, July 20, 1908) says the Roentgen rays show how rapidly a collargol enema is absorbed.

"Thus in the case of a 15 year old girl, who received, after a cleansing clyster and a salt irrigation, an enema of 2 gm. collargol in 100 gm. water, Roentgenograms were taken at first hourly and then every two hours until ten hours after the enema. It was very clearly visible how the silver shadow changed. Most of the enema is absorbed in the first hour, the rest almost entirely in the second hour. An aqueous irrigation after eight to ten hours is returned almost clear or but slightly brownish."

NOT EXCRETED IN THE URINE

The data which we gave on this point in our October, 1907, pamphlet, were presented only for the sake of completeness, since it is of not the least practical importance or significance if collargol is excreted in the urine or not. We acknowledge that an error was made in stating that Lange found silver in the urine after administering collargol. He found it in the kidneys, not in the urine. it is also true that in Buberl's patients the presence of silver in the urines may be explained on the ground that the respective patients had pyuria. By an error the finding of collargol in the urine was ascribed to Baginsky instead of to Bamberger.

EXPERIMENTAL RESULTS IN ANIMALS

The experiments of Cohn, Brunner and Trommsdorf have been aptly criticised by Dr. Frank P. Vale, Washington, D. C., in a paper entitled "Clinical and Experimental Experience with Colloidal Silver and a Virulent Streptococcus" (read before the Medical Society of the District of Columbia; *Am. Jour. Med. Sc.*, November, 1906). He said:

"It will be observed that in these experiments, with the exception of two intraperitoneal inoculations, the infective organism was thrown directly into the circulation in relatively overwhelming numbers. This method of inoculation in no way simulates the manner of acquiring disease through the ordinary channels of infection, when the invading organism gains access to the circulation late in the course of the disease or frequently not at all. In experiments with the streptococcus, however, three in number, Cohn inoculated the scarified ear of a dog with a loopful of the culture, followed by an intravenous injection of colloid silver, about 0.1 gm. per kilo of animal body weight, and in each instance the control lived longer.

"But in these last mentioned experiments, the silver was injected at the time of inoculation. Now the leucocytosis following the administration of colloid silver, which is at its height at the end of 24 hours, plays the important, but as yet imperfectly understood part in its action. It has been shown in efforts at prevention of sepsis through hyperleucocytosis induced by the injection of nuclein, pepton and other substances, that to obtain favorable results it is necessary that the inoculation be made at the height of the induced leucocytosis."

Dr. Vale inoculated twenty rabbits subcutaneously twenty-four hours after injecting colloid silver, when the average leucocytosis was 12,000, due chiefly to an increase in polynuclear cells. After the intraperitoneal infection the leucocytosis was of about the same intensity, but due chiefly to an increase in lymphocytes, as if the entire army of polynuclear phagocytes had responded to the call in the peritoneal cavity.

"In no case was a local reaction from the subcutaneous inoculation with the streptococcus entirely prevented, but with the largest dose of 0.5 gm. per kilo of animal weight, the inflammatory process was transitory and in marked contrast to that in the control."

As stated in our pamphlet, animal experimentation done under conditions that closely simulate those of a clinical infection, invariably has given favorable results. This is shown by the reports of numerous veterinary surgeons.

ITS PROPHYLACTIC VALUE

There is an obvious difference between administering collargol topically for the prevention of a local sepsis in an accidental or operative wound, and its use by injection into the veins. There is, therefore, no contradiction between the claim of prophylactic action for collargol and the objection to its simultaneous administration with infective material in animal experimentation.

ITS ACTION ON LEUCOCYTES

While we have not asserted that the leucocytogenetic effect of collargol is its sole explanation of its virtues, we do not, on the other hand, believe warranted the committee's assumption that the leucocytosis is of no significance whatever.

ITS CATALYTIC ACTION

The committee's "*reductio ad absurdum* argument," applied to Hamburger's findings, is based on wholly incorrect premises, Hamburger says literally:

"It is apparent from this that argentum colloidale has hastened the oxidation of the hemolytic toxins. The quantity of collargol was very small, 0.000000358 gram atoms of silver proved effective even in 2 c.c. toxic serum."

This number of gram atoms silver is equal to 0.000063 grams of silver. In a liter of toxic serum there must therefore be present, to get an effect, 0.0315 grams silver = to 0.035 collargol. Since in an intravenous injection 0.1 to 0.3 gram collargol are injected each time, Hamburger's tests demonstrate that collargol, in the quantity in which it is introduced in the blood, can hasten oxidation of bacterial toxins. The committee erroneously ascribes to Hamburger the statement that "lesser concentrations increase hemolysis." What he says is that the less collargol is added the more rapid is hemolysis.

In duplicating Hamburger's test, at the instance of the committee, Dr. Anderson has overlooked a vital step: He has failed to conduct oxygen through the solution of diphtheria toxin to which he added collargol. His bad results were therefore inevitable, but, of course, prove nothing.

Robin's work was done with electrolytically prepared colloid silver, but his results were corroborative of those obtained by other observers in demonstrating the catalytic action of colloid silver, and were therefore perfectly applicable to collargol, which is nothing else than colloid silver.

H. Fueth (University Gynecology Clinic at Leipsic) said in the *Centralbl. f. Gynæcologie*, September, 1906):

"Colloid silver acts as a catalysator, i. e., it hastens the decomposition of H_2O_2 under formation of nascent oxygen, without itself undergoing any change."

THE CLINICAL EVIDENCE

The committee concedes that the clinical evidence is extensive, but implies that it is not competent. In disproof of this we call attention to the standing of some of the physicians who have written favorably about collargol: Professor Roswell Park, Buffalo, in "Principles and Practice of Modern Surgery," 1907. Prof. B. K. Rachford, Cincinnati, in *Am. Jour. Med. Sc.*, January, 1909. Prof. F. Forchheimer, Cincinnati, in "Prophylaxis and Treatment of Internal Diseases," 1908. Prof. Norbert Ortner, Vienna, in "Treatment of Internal Diseases," 1908. Professor Plehn, in *Deutsch. med. Wchnschr.*, Dec. 24, 1908. Prof. E. C. Dudley, in "Principles and Practice of Gynecology," 1908. Dr. F. Kreissl, in "Urogenital Therapeutics," 1908. Dr. L. S. Pilcher, in "*Ann. Surg.*," January, 1907.

Surely this is competent authority. We do not understand that the committee impugns the competency of these distinguished members of the profession. The only question which remains, therefore, is to see if our claims are warranted by the tenor of this the clinical testimony. Our claims are:

1. Used prophylactically, collargol is an almost unfailing safeguard against sepsis from accidental or operative wounds or childbirth.

2. Administered early it usually arrests incipient medical or surgical infections or renders their course briefer and milder.

3. Even when employed only as a last resort, it sometimes achieves brilliant recoveries in desperate, apparently hopeless cases.

The third claim being the one most open to scepticism, its substantiation will justify the others. We refer to the publication from Bumm's clinic, which shows a clear reduction of the puerperal mortality under collargol. One of the members of the committee, Prof. Solis Cohen, has seen "two recoveries from malignant endocarditis and numerous recoveries from other grave infections" as the result of energetic employment of it intravenously and per rectum. Dr. George T. Harrien says: "I have saved cases with it that I could not have saved without it. The collargol literature, so far as we know, comprises close to 500 reports. Now, assuming that 30 of these are unfavorable, you are confronted with the conclusions of 470 observers. There is thus an overwhelming preponderance of favorable evidence. And absolute unanimity exists with hardly any remedy of the materia medica.

OUR PRESENTATION OF THE TESTIMONY

The committee alleges that we quoted from an early edition of Tillmann's "Allegemeine Chirurgie," because he there expressed himself more favorably than he did in later editions. Tillmann said:

V 53
1909

IN HIS 7TH (1885) EDITION:	IN HIS 10TH (1907) EDITION:
Mehrfach sah ich ueberraschend guenstige Wirkungen, in anderen Faellen war klein Erfolg zu konstantieren.	Das Verfahren hat sich mehrfach beim Menschen bewaehrt, in anderen Faellen war es erfolglos.
(Frequently I saw astonishingly favorable effects, in other cases no success was determinable.)	(The method has frequently proved successful in man, in other cases it was without result.)

If any difference is appreciable, it is rather in favor of collargol, since in the later edition Tillmann generalizes the favorable conclusion which he originally based only on his own observations. Moreover he devotes more space in the later edition to collargol, citing Netter, von Baracz and others. We certainly would have quoted the 1907 edition in preference to the 1899, if we had been aware of its existence, which we were not. We can not search the medical archives of the world from year to year in order to make sure that an author has not published later writings containing slight alterations of his original phraseology. The library of the New York Academy of Medicine does not possess the eighth and ninth editions of Tillmann's book, and we do not even know if the tenth edition (1907) was obtainable at the time our October, 1907, pamphlet was compiled.

The committee points out that in reproducing Hocheisen's favorable report we left out a part of the introduction, in which he said that collargol was used by him in Landerer's clinic without his seeing any result that could not have been secured quite as well with the customary surgical or general treatment. But it was necessary to omit practically the entire introduction, including a great deal of favorable matter, as we had to sacrifice everything excepting the essence of his report in order to make a 3,000-word abstract of the 15,000-word original.

This procedure must be followed in compiling literature. If we reproduced the publication in extenso the printer's bill would be many times as great, and the physician would be quite discouraged at the very outset by the task of wading through pages of unimportant prefatory remarks and explanations, repetitions, literature reviews, etc. We are convinced of the value of collargol—else we would not introduce it—and we present the material evidence in a manner which renders it available to the busy physician. Since it is impossible to acquaint the physician with all of it, since we can in fact acquaint him with only a small part or with none at all, we must use discretion in selecting that for which we request his consideration. We certainly do not thrust before him material which we consider valueless, but chose only what we consider of real importance.

Therefore, we are obliged to omit many publications, favorable as well as adverse, which seem relatively less important. Thus the committee finds fault with us for not reproducing the report of Baginsky. But he used unguentum Credé in "scarlatinal affections of the gravest form" and "the inunctions were not instituted at the beginning of the disease but only after several days." Now we do not claim that unguentum Credé cures scarlatinal affections of the gravest form in which it is used belatedly; in our October, 1907, pamphlet, we say (p. 7):

"Unguentum Credé is inuncted as a prophylactic of puerperal sepsis and in the treatment of *mild* general septicotoxic processes."

In "severe and desperate infections" we recommend collargol intravenously. Nor do we claim that even collargol intravenously cures every case. The claim is that it sometimes cures desperate cases.

Therefore, what object could have been served by reproducing Baginsky's report. We warn against the very thing which he has done.

Referring to Jeannin and Bonnaire's paper, it is not correct that "there is no evidence that the patients had actual septicemia or pyemia." These authors say:

"Collargol treatment was instituted by us only in severe, recalcitrant and general infections, or such as tended to become so. We never used it in merely benign or local infections. . . . The intravenous injections were made only after the failure of the ordinary treatment such as intrauterine irrigations, digitalis, curettage and lavage. Our statistics should therefore be compared only with the most severe form—parenchymatous metritis, septicemia, pyemia."

They conclude:

"Collargol is a method frequently effective against generalized puerperal infections or those tending to become so."

The committee thinks we intentionally withheld Osterloh's report in the *Deutsch. med. Wchnschr.*, 1902, No. 21, wherein the author expresses himself with some reserve regarding collargol. But we also did not reproduce Osterloh's later and much more favorable report (Jahresber. d. Gesellsch. f. Naturu. Heilkunde, 1904). The following is a literal translation of an abstract thereof in the *Centralbl. f. Gynækologie*, 1906, No. 15:

"After an exhaustive compilation of the casuistic literature the author relates a case which he himself observed. This consisted of a puerperal fever in a primipara (an insane subject), after manual removal of the placenta. Thrombosed vessels in both parametria, daily chills. Treatment consisted of four intravenous injections of 7 to 8 c.c. of a 1 per cent. collargol solution, in bi-daily intervals, and of 12 enemata with 50 c.c. of 1 per cent solution in average intervals of 2 days. After 5 days no more chills. The effect of collargol was favorable on cessation of chills and in improvement of the general condition. The author considers Collargol treatment especially indicated in general puerperal sepsis without localization."

Döderlein also expressed himself distinctly favorable in the *Ztschr. f. aerztl. Fortbildung*, 1907.

The committee says that we mistranslated one of Hocheisen's sentences thus: "Collargol is an invaluable aid in the treatment of puerperal sepsis," and says that the sentence should read: "Collargol is an aid in the treatment of puerperal sepsis." Hocheisen (p. 893 of the Med. Klinik) uses the word "wertvolles," which, however, would have been better rendered as "valuable."

The committee objects to our quotation from Schlossmann's paper that "he advised 1 per cent. collargol solution in sweetened milk when an intestinal antiseptic is needed." The committee seeks to draw from his paper the inference that he is not really in favor of intestinal antiseptics, but recommends collargol as a placebo to those who are foolish enough to believe in intestinal antisepsis. This assumption is not warranted, as shown by the ending of Schlossmann's paper:

"For infectious diseases of the mucous membranes, above all for ophthalmoblennorrhea neonatorum and cholecystitis, there is no other remedy (than collargol) which so intensively and rapidly leads the disease process to cure."

The committee asserts that Rittershaus reported by-effects from collargol. Rittershaus's by-effects (infiltration, embolism) were, however, not due to collargol, but to his wrong technic in administering the injections; he allowed the solution to escape into the tissues, instead of injecting into the vein, and permitted air to get into the syringe.

The committee's majority report charges that we sought to give the impression that all the reports cited in the "Bibliography" (October, 1907, pamphlet) are favorable. This is disproved by the fact that we distinctly say that Ernst Cohn's report was unfavorable and give immediately after his name the number referring to his report in the bibliography.

COMMITTEE'S CRITICISMS OF AUTHORS

The committee criticises the report of Harrison, Witthauer, Afanassjeff, Wenckebach and Netter. We need hardly take it upon ourselves to defend these authors, and merely call attention to the fact that one of Wenckebach's sentences is misinterpreted by the committee. Witthauer's observations ar confirmed by those of Kiebold, Plehn and others. Netter's total experience consists of many hundred cases—not of 73 cases, as the committee erroneously states. *Vide* our bibliography in the October, 1907, pamphlet.

CONCLUSIONS

We are quite ready to admit the occurrence of mistakes in our literature; but these mistakes were all trifling, unintentional, without the least importance. Errors are prone to creep into printed matter, despite every possible care, and all that can be done is to guard against their repetition when we learn of them. The committee's report contains quite a number of very important errors. We therefore regret the fact that the report was arrived at by a method of excluding defence. Having shown the unsoundness of its premises, we believe that it will collapse under the weight of its error and unjustness.

Respectfully,

SCHERING & GLATZ.

THE COMMITTEE'S REJOINDER TO SCHERING AND GLATZ'S LETTER

In reply to the Council's inquiry as to our recommendation concerning the response of Schering & Glatz to our report on Collargol, we would say that we recommend that it be published. We would state, however, that after reading it very carefully, we can not find therein any reason for altering our previous conclusions; nor can we find any evidence that we have dealt unjustly with Schering & Glatz, or misinterpreted or otherwise misused any of the testimony that they submitted in support of their claims.

On the contrary, we find in their reply direct admission of a number of false statements that we pointed out; and further they tacitly admit numerous other objectionable things that we emphasized, such as the exaggerated presentation of authors' views, the suppression of portions of sentences and of portions of reports, and the like—all of which they evade answering, except instances that we shall mention. Indeed, they openly state that they choose for their advertising pamphlets only the matter that they "consider of real importance"—a statement that is much illuminated by the fact that the matter left out in the instance that they are discussing, as well as in various other instances, was exceedingly damaging to their claims concerning collargol.

We find, further, that in their reply they make use of the same methods that we condemned most severely in our report. Carefully comparing our original report and Schering & Glatz's reply will show that they have misquoted what we said as to Bonnaire and Jeannin and Netter in a minor way, but in a manner that appears to be intended to discredit our report. Further, in their reply—and especially in a pamphlet recently sent broadcast throughout the country—they present a most excellent illustration of a practice that we condemned with especial severity; namely, the mutilation of statements of authors through subtraction, addition, and rearrangement of words and sentences in such a manner as to make the statements appear stronger than they were, giving them in quotation marks, as if they had been taken without alteration from the authors. It is somewhat remarkable that they should have employed this practice in attempting to discredit the one instance in which they now claim that we falsely accused them of having done exactly this thing. This, again, seems to be clearly done in the belief that the precise facts will not be looked up. The particulars of this matter are as follows:

Schering & Glatz stated that we were wrong in charging that they had inserted the word "invaluable" in a sentence that they quoted from Hocheisen, and insisted that he used the word "werthvolles," which means "valuable." It would be difficult to understand their reply, were it not for the somewhat more extended reply that they have scattered through the mails. The latter clears up the legerdemain. The sentence in the original pamphlet, and the one that we criticised in our report, was: "Collargolum is an invaluable aid in suitable cases." The sentence they now use is: "Collargol is an invaluable aid in cases of puerperal sepsis." This latter sentence is made up as follows: Near the top of one page of Hocheisen's paper from which they quote occurs the following statement: "Hence, Collargol is no specific, but is an aid in suitable cases." Near the bottom of the same page, after having stated a variety of types of cases in which it is not suitable, Hocheisen says: "Used according to these principles, Collargol injections constitute a valuable measure in cases of puerperal sepsis." Hence, it becomes quite clear that the sentence with which we are now presented in running form and in quotation marks is made up, in its first part, from the top of the page, and in its last part, from the bottom of the page, the word "valuable" having been changed into the word "invaluable," and transposed in position in the attempt to justify what we originally criticized.

We were really very gentle with this point in the original report. Any one who cares to read the extract from Hocheisen in Pamphlet C and compare it precisely with the original will see that Schering & Glatz actually, in Pamphlet C, have not only done what we said, but have eliminated a number of things that Hocheisen said, though the extract is given in running form and in quotation marks; and the things that are eliminated are almost all such as to guard and restrict his statements concerning the use of the substance.

Our original criticism concerning this matter was precisely correct. As to their other statements concerning the clinical evidence, we can not go extensively into this matter. We feel that it is quite sufficient to refer any one back to the details of the original report, merely directing them to note carefully in the reply as contrasted with our report the interpretation of authors in a way that appears entirely unjustifiable and particularly the evasions of the main points at issue in such matters as the quotation from Tillmanns. As to such new evidence as that referred to Osterloh, we would note here, again, that their quotation is from an unauthorized abstract; and that in the entire paper by Osterloh, which they do not seem to have consulted, but which we have, the conclusions are more cautious and guarded than those that are presented in this abstract.

The most important portions of their reply, since they relate in part to actual work, are those concerning the pharmacological evidence. As to the form in which Collargol circulates, we referred to precisely the words which they now quote from Hocheisen, when we said that he had offered no evidence. In regard to this and the other evidence that is offered concerning this point, we would say that it is perfectly palpable to any one that none of this is evidence as to the condition in which Collargol is found in the body. The most recent testimony concerning this point (and, indeed, so far as we know, the only testimony that has some appearance of soundness) is that found in the recent study by Luzzato, who agrees with the statement of Schering & Glatz that Collargol rapidly disappears from the blood-stream and is quickly found in the organs; but states that it is found there chiefly AS METALLIC SILVER, AND NOT AS COLLARGOL. This paper had escaped our attention when we made the report, and it seems still to have escaped the attention of Schering & Glatz.

As to absorption, the work of Loebl and Seidel, to which Schering & Glatz refer, we were familiar with. It is scarcely necessary to say that it is ridiculous to attempt to reach any conclusion regarding scientific matters by such gross methods. In regard to this point, also, Luzzato has some clarifying information. He states that, given per os or by enema, Collargol is either not absorbed at all or is absorbed in extremely slight amount; and he says that this is due to the fact that it is readily precipitated out as metallic silver.

As to the experimental results in infected animals, Cohn, Brunner, and Trommsdorff have, as we noted in the report, given Collargol just before, coincidently with, immediately after, and many hours after the infection; and Cohn even let some of his animals become actually ill with streptococcus skin infections before using the substance. All the results, as we stated in our report, were negative. In this section of the reply, it plainly is admitted that all of these experiments were unfavorable; but now, in criticising them, Schering & Glatz shift their ground. In the original pamphlet, Cohn was severely condemned because he gave his injections of Collargol before the infective material; and it was stated that in such a case the leukocytes would be too busy taking care of the silver to be able to attack the infection. In the new evidence now presented, we are told that the injection should be given twenty-four hours before the infection is set up, when the leukocytosis is at its height. It appears quite true that this is the only chance for success that is left; but, in the first place, these two statements are the opposite of each other and, in the second place, such results would not appear very valuable practically, because it is somewhat difficult to use a treatment before the patient gets sick. In the third place, the practice now recommended is obviously prophylaxis; and yet, in the next section we are told that the committee's criticisms of the claims that Schering & Glatz make for Collargol as a prophylactic were very foolish, because there is a difference between giving it topically and giving it by injection—all of which can only be interpreted to mean that it works as a prophylactic when used topically, but not when given intravenously. Clearly, also, the reply at this point states, through quotation, that the important part of the action of Collargol is the leukocytosis which it sets up; and it is directly compared to nuclein and other substances that produce leukocytosis. This must mean that the supposed direct bactericidal, catalytic, and other effects described are unimportant; for such direct effects could not be dependent on a leukocytosis.

On the other hand, in the next section Schering & Glatz state that the leukocytosis is not the sole explanation of its action; and, in reply to our perfectly correct statement that

V 53
1909

the leukocytosis can not be considered to be of any definite significance in regard to its effect on a general infection, they merely say mildly that they do not agree with this. We would say, Mr. Chairman, that we consider it a little ridiculous for serious-minded persons to play this game of hide-and-seek any further. We have now been told by Schering & Glatz:

1. Collargol must not be given before the infective material, or the resistance of the organism will be lowered by obstructing the activities of the leukocytes.

2. It must be given before the infection.

3. One must, on the other hand, wait until the animal is actually sick.

4. One must, however, not give the animal a very severe infection.

5. The most important effect is the leukocytosis following its use.

6. The leukocytosis is only a fraction of its effects.

7. It has "direct bactericide energy." (Cover of Pamphlet B.)

8. "We do not claim that Collargol kills bacteria, but that it hinders their growth."

9. It is a prophylactic, when injected.

10. It is not a prophylactic, when injected.

11. It acts like nuclein.

12 On the contrary, it has some mysterious activity, all its own, etc., etc.

Let us again point out, on leaving this section, that Cohn's work is once more misrepresented, as will be seen by comparing the statements as given in the reply with the correct statements in our report.

As to their comment on our interpretation of Hamburger's work, we would say that if these new figures are given correctly, we have done Hamburger some injustice. We can not, however, see that we have done the slightest injustice to Schering & Glatz, for, as we stated in the report, we took the figures that we used and the statement that lesser concentrations increase hemolysis, from their own pamphlet (the one marked B by you), and not from Hamburger's own articles, as the latter were not available to us. The figures and statements that we used are precisely correct as given in the Schering & Glatz pamphlet. Perhaps they will now argue that, after our other criticisms of their pamphlets, it was very unwise of us to have put faith in any figures in them. But the actual figures are not the point at issue, as we noted in our report, and since we have no contention with Hamburger, but only with Schering & Glatz's use of his work we do not need to refer to his original articles.

Every one knows that colloidal silver and various other colloidal substances, as well as a host of other substances, may act as catalysers *in vitro*. The matter for consideration is not the amount necessary to produce this effect *in vitro*, but whether any such effect can be shown to occur in the organism. The assumption that it does occur is entirely unjustified, unless there be evidence in favor of it, and particularly when there is evidence against it. Robin's studies of metabolism, we have already discussed. We would further say that his results might quite as readily be called toxic as catalytic; and in our present knowledge of things, they might more suitably be called toxic. The only work with which we are familiar that bears directly on this point and that was carried out under conditions clearly simulating those met with in the diseased organism are the experiments of Dr. Anderson, in which he injected both diphtheria toxin and Collargol into the circulation of living animals. The Collargol caused no lessening of the toxicity of the diphtheria toxin. These experiments Schering & Glatz skilfully avoid mentioning, and merely insist scornfully that Dr. Anderson's other experiments (*in vitro*) were faulty, in that he did not conduct a stream of oxygen through his mixture of toxin—and Collargol —solutions. We may leave it to the judgment of others whether such a procedure would really make such experiments more convincing or less so, as an imitation of the conditions that exist in the living organisms; but whatever may be said about this point, Schering & Glatz can scarcely demand that in his experiments *in vivo* Dr. Anderson should have conducted a stream of oxygen into the hearts of his guinea-pigs when he injected diphtheria-toxin and Collargol.

The truth of this whole matter seems to be that there is no direct evidence in favor of this interesting hypothesis of Hamburger, while there is some evidence against it; and there is no more reason for building sweeping therapeutic assertions on it than there would be for saying that because colloidal platinum will, *in vitro*, act catalytically in hastening the transformation of alcohol into acetic acid, we might optimistically treat acute alcoholic intoxication by the use of colloidal platinum. If we could transform the alcohol into acetic acid, it would, of course, be easy then to use alkalies to neutralize the acetic acid, and thus make the alcohol wholly innocuous.

One further point: Schering & Glatz charge that we said quite improperly that Rittershaus and others have produced dangerous symptoms with Collargol (signs of embolism of the lungs, etc.), and they state that these results were all due to faulty technic. This is hardly worth while replying to, for it is manifestly merely an entirely unjustified interpretation of the bad results we referred to; but in regard to untoward effects of drugs, experimental results in animals have illuminated many questions, and seemed to have illuminated this one somewhat brilliantly. The animal to which Schering & Glatz refer as having been studied chemically by Lange died three hours and a quarter after an injection of Collargol, nothing else having been done to it, so far as the protocol shows. Furthermore, Luzzato states that when injected into the veins Collargol produces lesions of the lungs "with extreme readiness"; and Foa and Agazzotti who also have recently made an extensive study of the effects of colloidal silver preparations, say that Collargol in small doses produces fever, phosphaturia and slight albuminuria, while large doses produce marked phosphaturia and a very severe nephritis with casts and hematuria, which, in a short time, leads to the death of the animal. In order to avoid misunderstanding we would say that the two articles last referred to we have seen only in abstract, but the abstracts were not the wholly unauthorized kind that we criticized Schering & Glatz for using, but were written by the authors themselves. In consequence of these and the other very disquieting reports we have referred to we must emphasize our previous statement that the claim that Collargol is harmless when administered in any manner is far from justified.

Usefulness of a Card Index of Nostrums

Every physician can testify from personal observation to the harmfulness of "patent medicines;" harmful either because the drugs they contain are contraindicated, because they lead to the formation of a habit, or more often because the person taking them is deprived of proper treatment, perhaps, until it is too late. When, therefore, a physician is questioned in regard to the value of the "patent medicine," it is not difficult for him to speak in general terms of its harmfulness or worthlessness; when, however, he wishes to educate his patients in regard to the viciousness of self-drugging, it is a material aid for him to have a specific knowledge of the nostrum in question.

It is for this reason that THE JOURNAL has published, from time to time, analyses of "patent medicines," as for instance, those of "kidney cures," "liver medicines," "obesity cures," etc., and will continue to do so, probably to a greater extent in the future than in the past. But the publication of such matter will be of value for the purpose for which it is intended, only to the extent to which physicians use it. The main object of this paragraph is to suggest that for ready reference, a card index record be kept of all these articles. This will be much more available for ready reference than THE JOURNAL index. Such an index is easily kept up and we feel sure will prove handy in emergencies—that is, when one wants some definite knowledge in regard to a particular preparation.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

HOP VINES TO EXCLUDE FLIES

A writer in the *Christian Advocate* of New York suggests that hop vines may be objectionable to flies. Living in a town in Bulgaria, a land where filth and rubbish abound as almost nowhere in America, this writer considers that her house may be considered a fair testing place for the efficacy of hop vines in keeping out flies. The vines run over the porch and over the windows. There are no screens but no flies enter the kitchen no matter what cooking is done there. When the vines were laid on the ground so that the house could be whitewashed, the flies swarmed into the kitchen; on replacing the vines, freedom from flies was again enjoyed. Although we depend so much on screens in the United States, this information may interest many because screens can seldom be perfectly effective. It may be a question whether the flies are actually kept out of the room because the hop vines are objectionable to the insects or because the room is darkened by the vines over the windows. Any room that is kept fairly dark has no attraction for flies. THE JOURNAL will be glad to know if others can answer this point.

DETECTION OF TUBERCLE BACILLI IN THE BLOOD

To the Editor:—Dr. Keen, in his article in THE JOURNAL, June 26, 1909, refers to Rosenberger's method of detecting the tubercle bacillus in the blood. Where may I get information regarding this diagnostic method? J. W. GRAHAM, M.D., Highland, Kan.

ANSWER.—Rosenberger's article is published in the *American Journal of the Medical Sciences*, February, 1909. He withdraws 5 c.c. of blood, mixes it with an equal quantity of a 2 per cent. solution of sodium citrate in normal [physiologic?] salt solution, and places it in the refrigerator for twenty-four hours. The sediment is then transferred to a slide with a pipette, dried and placed in distilled water until complete laking of the blood occurs. The delicate film remaining is dried, fixed and stained by the usual technic for tubercle bacilli. Rosenberger claims to have found bacilli in the blood in every one of 125 cases examined. The value of this method as a diagnostic procedure has not yet been determined.

CLIMATE FOR RHEUMATISM

To the Editor:—Where is to be found a good climate for a rheumatic child, one that would permit of out-of-door life during the winter months? C. R. J.

ANSWER.—One would naturally choose a warm, equable, sunshiny region, not excessively warm nor humid and not too high above the sea level, on account of the added work put on the heart. Southern California or the winter resorts of Georgia, such as Thomasville or Augusta, or even Southern Arizona or San Antonio, Texas, would be especially suitable for such cases.

Origin of Tetanus and Action of Tetanus Toxin.—No. 520 of the *Sammlung klinischer Vorträge* is devoted to a study of tetanus by C. Pochhammer. He says the tetanus toxin is deposited in and bound by the myelin in the medullary sheath. The toxin may be retained in the nerve tracts for years, which is probably the explanation of the connection between syphilis and tabes; infections especially accompanied by nervous symptoms generally leave the patient immune to renewed infection. His research confirms the fact that antitoxins or antibodies are not absolutely specific, but merely induce general processes of regeneration, and that serotherapy in established tetanus is generally useless or actually harmful, taxing the organism, even if it does not have a direct toxic action. Tetanus antitoxin should thus be dropped from the list of curative serums. When the first symptoms of tetanus develop it is then too late for serotherapy. Even when tetanus toxin was injected directly into the animals there was always a period of incubation before symptoms developed, and this interval could never be shortened to less than eight hours, no matter how large the dose. He explains this by the taking up and binding of the toxin in the finest peripheral terminals; owing to their ramifications increasing the surface area, and their abundant circulation, they are able to take up the toxin much more readily and extensively than the main trunks of the nerves. Only when the toxin has finally worked its way to the mixed peripheral nerves and nerve trunks do symptoms develop. For this same reason the shorter, small, mixed nerve branches are more readily affected by the toxin than the larger trunks, a fact which explains the localization of the symptoms in muscles of this kind, such as the muscles in the throat, neck and back, innervated by short, small mixed nerves. The whole syndrome of tetanus is thus robbed of its mystery by this research, he declares, especially by the discovery that there was no cramp in a limb after resection of a considerable stretch of its nerves.

Correspondence

Digitalis and Its Standardization

JUNE 16, 1909.

To the Editor:—The article in THE JOURNAL, June 12, on the above subject, is deserving of more than passing attention. Probably no drug is more extensively prescribed or enthusiastically lauded in the treatment of certain heart lesions (senile weaknesses with dilatation, etc.) than this one; and yet there is a constantly increasing multitude of us who have come to believe it to be absolutely worthless if not contraindicated in these conditions. Who is right?

If digitalis will do all, or even a part of what its admirers claim for it, then we have no efficient substitute therefor, and we "need it in our business"—at least I do, for I have, and have had for many years, constantly under observation many cases in which its administration would be indicated. Can it be that our lack of faith in this drug proceeds from our having used unreliable and inert preparations? If so, I for one am ready to "start over." It has, of course, been long recognized that an infusion of the leaves was the most reliable and efficacious method of administration; but where and of whom are reliable leaves to be obtained, and how is their efficacy to be maintained? I presume that there are good, effective digitalis leaves whose qualities are capable of standardization. My principal object in writing this is to enquire as to the possibility of making a pill containing say three-fourths or one grain of such leaves—such a pill as is advocated by Hirsch of Gottingen. Is it within the province of pharmacy to construct such a pill that will retain its efficacy for a reasonable length of time? If so, I am sure there is a market for it; alcoholic and non-alcoholic preparations are evidently too unreliable to be trusted.

W. H. CURTIS, M.D., Wilmington, Ill.

Kerosene as a Remedy and Its Variability

JULY 1, 1909.

To the Editor:—I have been greatly interested in the article by Dr. Granville S. Haines on Amebic Dysentery (THE JOURNAL, June 19, 1909, p. 1990) and especially his use of "coal oil" (kerosene) as a remedy. This substance is quite popular with a certain class of people as an external application in sore throat, "rheumatism" and other painful affections. All specimens of the oil do not, however, seem to be identical in constitution, for I have seen a number of cases of severe blistering following its use; also one case of severe pharyngitis following the administration of a teaspoonful by mouth. In all these cases the patients (or the parents) claim to have used it previously without such reaction. From this it would seem that the liquid differs in its irritating qualities, probably owing to its origin from different wells.

The result of the use of an irritating specimen in the manner recommended by Dr. Haines might be decidedly unpleasant. G. J. KAUMHEIMER, Milwaukee.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U. S. Army, for the week ended July 3, 1909:

Hartsock, Frederick M., major, ordered to duty at camp at Toledo, Ohio.

Little, William L., capt., ordered to Fort Jay, N. Y., for temporary duty.

Kierated, Henry S., capt., honorably discharged from the service of the United States, with one year's pay.

Miller, Edgar W., capt., ordered to Fort Wayne, Mich., for temporary duty.

Ewing, Charles B., major, granted leave of absence for two months, about July 25.

Fauntleroy, Powell C., major, ordered to duty at camp at Sparta, Wis.

Owen, Leartus J., capt., ordered to duty at camp at Toledo, Ohio.

McCornack, Condon C., 1st lieut., M. R. C., ordered from Plattsburg Barracks, N. Y., to duty with troops en route at Augusta, Maine.

Kleruff, H. Newton, 1st lieut., M. R. C., ordered from Fort Missoula, Mont., to Fort Snelling, Minn., for temporary duty in the field.

Giffin, Adolphe M., 1st lieut., M. R. C., ordered to active duty July 15, 1909; will proceed to Seattle, Wash., and sail August 5, for Philippine service.

V 53
1909

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ended July 3, 1909:

Rodman, S. S., P. A. surgeon, ordered to temporary duty at the Naval Recruiting Station, Indianapolis.

Guest, M. S., surgeon, detached from the Naval Academy, Annapolis, Md., and ordered to the Naval Hospital, Las Animas, Colo., for treatment.

Huntington, E. O., surgeon, granted sick leave for three months when discharged from treatment at the Naval Medical School Hospital.

Shook, F. M., P. A. surgeon, detached from duty in the department of government and sanitation, Canal Zone, Isthmus of Panama, and ordered to duty at the Naval Medical School, Washington, D. C.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the week ended June 30, 1909:

Ballbache, P. H., surgeon, directed to report at Bureau on special temporary duty.

Young, G. B., surgeon, granted 3 days' leave of absence from June 15, 1909, paragraph 189, Service Regulations.

Anderson, J. F., P. A. surgeon, directed to proceed to Detroit and Chicago, on special temporary duty.

Goldberger, Jos., P. A. surgeon, directed to proceed to New York, on special temporary duty.

Glover, M. W., P. A. surgeon, directed to make examination of keepers and surfmen of the Life Saving Service at Seattle Exposition.

Collins, G. L., P. A. surgeon, relieved from duty at Cape Charles Quarantine Station, and directed to proceed to Stapleton, N. Y., and report to the medical officer in command for duty and assignment to quarters.

McKeon, F. H., P. A. surgeon, directed to proceed to Hongkong, China, for temporary duty.

Warner, H. J., asst.-surgeon, directed to assume command of Cape Charles Quarantine Station.

Hunt, Reid, chief, division of chemistry, Hygienic Laboratory, detailed to attend the meeting of the American Chemistry Society, to be held in Detroit, June 29-July 2, 1909.

Doole, T. P., acting asst.-surgeon, granted 3 days' leave of absence from June 28, 1909, Paragraph 210, Service Regulations.

MacCaffry, W. B., acting asst.-surgeon, granted 10 days' leave of absence from July 11, 1909.

Reimer, H. B. C., acting asst.-surgeon, granted 5 days' leave of absence from June 12, 1909, Paragraph 210, Service Regulations.

Stevenson, J. W., acting asst.-surgeon, granted 5 days' leave of absence from June 26, 1909.

Health Reports

Cases reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended July 2, 1909:

SMALLPOX—UNITED STATES

California: Hobart Mills, April 1-30, 1 case, imported; Sacramento, June 5-12, 1 case; San Francisco, 1 case; Truckee, March 23, 3 cases, imported.
Georgia: Macon, June 13-20, 4 cases.
Illinois: Chicago, June 12-19, 1 case; Danville, June 13-20, 2 cases; Peoria, May 1-31, 44 cases.
Indiana: Fort Wayne, June 5-19, 21 cases; South Bend, June 12-19, 2 cases.
Kansas: Kansas City, June 12-19, 3 cases.
Kentucky: Covington, June 12-19, 1 case; Newport, June 13-20, 1 case; Paducah, June 12-19, 1 case.
Louisiana: New Orleans, June 12-19, 3 cases, 2 imported.
Minnesota: Minneapolis, May 1-31, 20 cases.
Missouri: Kansas City, June 12-19, 1 case.
Montana: Butte, June 10-17, 4 cases.
Nebraska: Lincoln, May 1-31, 14 cases.
North Carolina: In 17 Counties, April 1-30, 87 cases.
Ohio: Cincinnati, June 11-18, 3 cases.
Oregon: Portland, April 1-30, 6 cases.
Texas: San Antonio, June 12-19, 5 cases; San Saba County, April 9-May 26, 11 cases.
Utah: State, May 1-31, 135 cases.
Washington: Spokane, June 5-12, 2 cases; Tacoma, May 16-23, 2 cases, June 6-13, 2 cases.
Wisconsin: La Crosse, June 12-19, 1 case.

SMALLPOX—FOREIGN

Africa: Tripoli, April 24-May 22, 27 cases, 10 deaths.
Brazil: Bahia, May 7-14, 2 cases; Rio de Janeiro, May 16-23, 18 cases, 1 death.
Ceylon: Colombo, May 15-22, 1 case.
China: Canton, May 1-8, 5 cases; Hongkong, May 1-15, 6 cases, 5 deaths.
Egypt: Cairo, May 13-20, 5 cases, 4 deaths.
France: Paris, April 3-10, 2 cases, May 22-29, 7 cases.
Germany: Königsberg, May 15-22, 1 case.
India: Bombay, May 18-25, 12 deaths; Calcutta, May 8-15, 58 deaths; Madras, May 15-21, 2 deaths; Rangoon, May 8-15, 3 deaths.
Italy: General, May 30-June 6, 21 cases; Naples, 7 cases.
Java: Batavia, May 1-8, 3 cases.
Manchuria: Dalny, May 15-22, 2 cases, 1 death.
Mexico: Mexico City, May 8-15, 30 deaths; Monterey, June 6-13, 2 deaths; Veracruz, May 30-June 13, 2 cases, 1 death.
Portugal: Lisbon, May 22-June 5, 5 cases.
Russia: Moscow, May 15-29, 51 cases, 17 deaths; Riga, May 29-June 5, 6 cases; St. Petersburg, May 15-22, 8 cases, 8 deaths.
Servia: Belgrade, May 22-29, 2 cases.
Spain: Barcelona, May 31-June 7, 3 deaths; Valencia, May 22-29, 10 cases, 1 death.
Switzerland: Geneva, May 15-29, 9 cases.
Turkey in Europe: Constantinople, May 23-30, 1 death.
Turkey in Asia: Smyrna, May 6-13, 2 deaths.

YELLOW FEVER

Brazil: Pahia, May 7-21, 11 cases, 6 deaths; Para, May 22-29 3 cases, 3 deaths.
Mexico: Merida, June 4-11, 2 cases.

CHOLERA

India: Bombay, May 18-25, 8 deaths; Calcutta, May 8-15, 61 deaths; Rangoon, May 8-15, 1 death.
Russia: St. Petersburg, June 2-10, 58 cases, 24 deaths, June 23, 75 cases.
Straits Settlements: Singapore, May 1-8, 6 deaths.

PLAGUE

Brazil: Rio de Janeiro, May 16-23, 1 case.
Chile: Antofagasta, May 15, 6 cases in lazaretto; Iquique, May 16, 16 cases in 14 days.
China: Canton, May 1-8, 40 cases, 39 deaths; Hongkong, May 1-15, 9 cases, 6 deaths.
India: May 8-15, 5,239 cases, 4,578 deaths; Bombay, May 18-25, 136 deaths; Calcutta, May 8-15, 160 deaths; Rangoon, May 8-15, 10 deaths.
Japan: Yokohama, May 22-29, 1 case, June 2, 1 case.
Peru: May 8-15, 17 cases, 8 deaths.
Turkey in Asia: Bagdad, May 2-24, 9 cases.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARKANSAS: Homeopathic, Little Rock, July 13. Sec., Dr. P. C. Williams, Texarkana.
ARKANSAS: Regular, Little Rock, July 13. Sec., Dr. F. T. Murphy, Brinkley.
CONNECTICUT: Regular, New Haven, July 13-14. Sec., Dr. Charles A. Tuttle, 196 York St.; Homeopathic, New Haven, July 13. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave.; Eclectic, New Haven, July 13. Sec., Dr. T. S. Hodge, 17 Main St., Torrington.
DISTRICT OF COLUMBIA: Washington, July 13-16. Sec., Dr. George C. Ober, 210 B St., S. E.
INDIANA: 120 State House, Indianapolis, July 13-15. Sec., Dr W. T. Gotz.
MAINE: State House, Augusta, July 13-14. Sec., Dr. Frank W. Searle, 806 Congress St., Portland.
MASSACHUSETTS: State House, Boston, July 13-15. Sec., Dr. Edwin B. Harvey, Room 159, State House.
NEW MEXICO: Santa Fe, July 12. Sec., Dr. J. A. Massie.
OKLAHOMA: Guthrie, July 13. Sec., Dr. Frank P. Davis, Enid.
SOUTH DAKOTA: Watertown, July 14-15. Sec., Dr. H. E. McNutt, Aberdeen.
VERMONT: Burlington, July 13-15. Sec., Dr. W. Scott Nay, Underhill.
WEST VIRGINIA: Charleston, July 13-15. Sec., Dr. H. A. Barbee, Point Pleasant.
WISCONSIN: Madison, July 13-15. Sec., Dr. I. V. Stevens, Jefferson.

NATIONAL CONFEDERATION OF STATE MEDICAL EXAMINING AND LICENSING BOARDS

Nineteenth Annual Convention, held at Atlantic City, June 7, 1909

The Vice-President, DR. A. RAVOGLI, Cincinnati, in the Chair

There were present Drs. Edwin B. Harvey and W. T. Councilman, Massachusetts; L. F. Bennett, Wisconsin; Charles A. Tuttle, Connecticut; F. C. Zapffe and A. D. Bevan, Illinois; W. J. Means, N. R. Coleman, J. A. Duncan, R. A. Baker and M. A. Jerome, Ohio; Abraham Flexner of the Carnegie Foundation; N. P. Colwell of the Council on Medical Education; Henry Beates, J. C. Guernsey, Augustus Korndoerfer, Edward Cranch, C. S. Middleton, H. L. Northrop and D. P. Maddux, Pennsylvania; A. B. Briggs, G. T. Swarts and J. H. Bennett, Rhode Island; E. L. B. Godfrey, New Jersey; W. W. Potter, W. S. Ely, A. Vander Veer and A. T. Bristow, New York; F. S. Raymond, Tennessee; George Dock, Tulane University; W. H. Welch, Maryland; and S. D. Van Meter, Colorado.

The minutes of the eighteenth annual convention, held in Chicago, June 1, 1908, were read and approved.

Eulogy of Dr. Happel

Dr. A. Ravogli delivered an address which was a eulogy of the late Dr. T. J. Happel of Trenton, Tenn.

On motion, a committee was appointed to draft resolutions commemorating Dr. Happel, and a recess of five minutes was taken out of respect to Dr. Happel. The following resolutions were submitted by the committee and adopted by the confederation:

WHEREAS, By the death of Dr. Thomas J. Happel, of Trenton, Tenn., which occurred on the twenty-fourth day of May last, the National Confederation of State Examining and Licensing Boards suffers the loss of its honored President, Therefore,

Resolved, That in the death of Dr. Happel the medical profession has lost one of its most valued members and the community an honored citizen. Dr. Happel spent the greater part of his active life in the upbuilding of medical education and the medical profession in this country, and,

Resolved, That this Confederation extends its most profound sympathy to the family and relatives of the late Dr. Happel.

Resolved, That a copy of these resolutions, duly engrossed, be forwarded to the family of Dr. Happel, and the same be spread on the records of this confederation.

Report of the Executive Council

The report of this council was read by the chairman, Dr. N. R. Coleman. Acting on the recommendations contained in this report, a committee of five, all of whom are members of state boards, was appointed to investigate and report at the succeeding meeting of the confederation on the subject of clinical instruction in medical colleges; and provision was made for the presentation of this subject by clinical teachers themselves. The secretaries of each of the state and territorial examining boards, and of the District of Columbia, were appointed as a committee of official correspondents of the confederation.

Report of the Examinations Committee

Dr. J. C. Guernsey read the report of this committee, which was referred to the executive council for further consideration, and on the basis of recommendations contained therein the following resolution was adopted:

WHEREAS, A mixed examination, oral, practical and written, of applicants for medical licensure in every state is important, therefore be it

Resolved, That this confederation earnestly recommends to the various state boards now restricted as to their methods of conducting examinations to take proper steps to secure amendatory legislation to enable them so to conduct their examinations.

Secretary's Report

Dr. M. G. Motter reviewed briefly the work of the subcommittee on the teaching of materia medica and therapeutics of the Council on Medical Education of the American Medical Association. The recommendations contained in this report were referred to the executive council, and the following resolutions were finally adopted:

WHEREAS, It is generally recognized that the time available for instruction in therapeutics, materia medica and pharmacology does not suffice for the study of all the known drugs; and

WHEREAS, It is also recognized that the limited time can be devoted, to best advantage, to acquiring a thorough familiarity with the characters, actions and uses of the important drugs, at the expense of those of doubtful or negative value; therefore be it

Resolved, That the National Confederation of State Medical Examining and Licensing Boards urges on its constituents the advisability of confining examination questions to the most important preparations of the more important drugs.

Resolved, That it recommends to their attention the report of the sub-committee on the teaching of materia medica, etc., of the American Medical Association's Council on Medical Education; and be it further

Resolved, That the president of the National Confederation of State Medical Examining and Licensing Boards be, and he is, hereby authorized and instructed to appoint a committee of three to confer with the Council on Medical Education and to compile and report to this confederation a list of the more important drugs and their preparations to which the examinations of the constituent boards may be confined, this list to be published in THE JOURNAL of the American Medical Association as with the approval and endorsement of the confederation.

Officers Elected

The following officers and members of the executive council were elected for the ensuing year: President, Dr. A. Ravogli, Ohio; vice-president, Dr. J. C. Guernsey, Pennsylvania; second vice-president, Dr. Charles A. Tuttle, Connecticut; secretary-treasurer, Dr. M. G. Motter, Washington, D. C.

Executive council: Dr. N. R. Coleman, chairman; Dr. Edwin B. Harvey, Dr. James A. Duncan, Dr. Henry Beates, Dr. D. P. Maddux.

The following committees were appointed:

Committee on clinical instruction: Dr. Henry Beates, chairman; Dr. Charles A. Tuttle, Dr. Fred C. Zapffe, Dr. M. J. Lewi, Dr. L. F. Bennett.

Committee to compile list of drugs: Dr. M. G. Motter, chairman; Dr. J. C. Guernsey, Dr. George MacDonald.

Papers Read

The following papers were read:

"The Necessity of a Practical Test for Candidates in the State Examinations," by Dr. J. C. Guernsey; "Need, Methods and Value of Medical College Inspection," by Dr. N. P. Colwell; "Standing of Medical Colleges" by Dr. James A. Duncan; "Practical versus Theoretical Examinations," by Dr. W. T. Councilman; "The Inadequacy of the Written Examination," by Dr. Edwin B. Harvey; "What Branches or Portions of Branches Should be Included in the Written, and What in the Oral Examinations?" by Dr. J. C. Guernsey; "Is It to the Best Interests of Students and Medical Examining Boards to Have Divided Examinations?" by Dr. William Warren Potter; "The Feasibility of Practical Examinations," by Dr. Augustus Korndoerfer; "How Can Practical Examinations be Graded and Recorded?" by Dr. L. F. Bennett.

New Members

Dr. Edward Cranch of Erie, Pa., Dr. George MacDonald of Washington, D. C., and Dr. A. B. Briggs of Providence, R. I., were elected to membership.

Next Meeting Place

St. Louis was selected as the meeting place for 1910, the meeting to be held the day preceding the meeting of the American Medical Association.

Association News

NEW MEMBERS
For the Month of June

The following is a list of new members of the American Medical Association for the month of June, 1909. Names marked with stars or daggers are of those who became members at the Atlantic City session; the dagger indicates that the name so marked was previously on the subscription list:

ALABAMA

Casey, T. A., Birmingham.
†McCafferty, E. L., Mt. Vernon.
*Partlow, W. D., Tuscaloosa.
Taylor, T. F., Tuskegee.

ARIZONA

White, D. W., Phœnix.

ARKANSAS

Caldwell, Robt., Little Rock.
Cannon, G. E., Magnolia.
Gray, E. M., Poughkeepsie.
†Hinkle, C. G., Batesville.
Wood, Clark, Fort Smith.

CALIFORNIA

†Farris, C. M., Sacramento.
Hess, H. A., San Francisco.
Irones, R. R., San Diego.
Jacobs, S. N., San Francisco.
Jones, C. B., Sacramento.
McCue, J. E., San Rafael.
†Morrow, Howard, San Francisco.
Porter, Langley, San Francisco.
Remmel, A. J., San Francisco.
Rockledge, P. L., Cambria.
Smith, F. J., San Diego.
*Wymore, W. W., San Francisco.

COLORADO

Matson, W. F., Denver.
Woodruff, R. H., Segundo.

CONNECTICUT

*Alling, A. N., New Haven.
*Keating, W. P. S., Willimantic.
†Morrissey, M. J., Unionville.
Watson, W. C., Bridgeport.
*Weidner, Calvin, Manchester.

DELAWARE

†Blake, C. H., Newark.

DIST. OF COLUMBIA

Foote, J. A., Washington.
Greene, W. P., Washington.
*Heinecke, G. R., Washington.
†Miller, M. E., Washington.

GEORGIA

Ballenger, E. G., Atlanta.
Cunningham, F. M., Macon.
Jones, Jabez, Savannah.
Massoud, M. A., Stillmore.
*Wise, B. T., Jr., Plains.

ILLINOIS

Barker, F. M., Waukegan.
Bascom, H. M., Ottawa.
Connor, W. H., Chicago.
Enright, W. J., Chicago.
Farrell, E. J., Rockford.
Haefner, A. W., Chicago.
Hayes, Richard, Odell.
*Hecker, W. B., Watseka.
†Hector, W. S., Chicago.
Herb, Isabella C., Chicago.
deKleffer, O. M., Chicago.
Leeson, F. W., DeKalb.
Paddock, W. R., Lockport.
Tow, Johanna E., Chicago.
Weber, A. T., Chicago.

INDIANA

†Harpole, C. B., Evansville.
Huffman, Wm. G., Richmond.
Krueger, F. W., Richmond.
Mayfield, C. H., Brookville.
†Norton, F. D., Columbus.
*Shimer, Will, Wanamaker.
Spooner, J. P., Peru.
Warwick, C. A., South Bend.

IOWA

Austin, H. M., So. English.
Bothwell, C. D., Fairbank.
Bruechert, H. N., Parkersburg.
Campbell, S. A., Malvern.
Christy, Edgar, Glenwood.
Crabbe, A. A., Traer.
Cretzmeyer, F. X., Emmetsburg.
Ensley, R., Shell Rock.
Everall, B. C., St. Olaf.
†Fox, W. H., Waucoma.
Goff, H. L., Lamoni.
Hartley, G. A., Battle Creek.
Hinkle, G. W., Harvard.
Hunt, H. H., Hazleton.
Ingersoll, R. Z., Promise City.
Jessup, A. E., Diagonal.
McColm, C. W., New Market.
McConnaughey, J. T., Wayland.
Phillips, S. W., Hamiontown.
†Porath, W. C., Varina.
Printz, E. T., Moulton.
Rimer, E. M., Guernsey.
Scott, Sophie L., Des Moines.
Shoope, C. C., Des Moines.
Smith, H. T., Humeston.
Stolley, J. G., Moville.
Tate, T. E., Albia.
Van Dyke, J. H., Cedar Falls.
Wailes, J. W., Davis City.
*Walsh, T. N., Hawkeye.
Young, P. G., Hocking.

KANSAS

DePew, F. L., Howard.
Light, R. A., Chanute.
Long, A. J., Elk Falls.
*Maser, G. W., Parsons.

KENTUCKY

*Alderson, S. P., Russellville.
Dale, C. F., Lexington.
Dotson, W. A., Phelps.
Gibbs, S. C., Lawrenceburg.
Hill, A. F., Vanceburg.
Houston, E. B., Hazel.
Kidd, C. E., Paducah.
†McClymonds, J. T., Lexington.
†Minish, L. T., Frankfort.
Patrick, W. F., Louisville.
Richardson, W. F., Lewisburg.
†Strother, F. P., Madisonville.
Taylor, James, East York.
Travis, W. T., Tribune.
Washburn, L. L., Heights.
Weidner, Carl, Louisville.

LOUISIANA

Blum, H. N., New Orleans.
*Craighead, C. C., Athens.
*Hendrick, J. A., Shreveport.

MAINE

†Beckler, W. B., Auburn.
Buckman, R. W., Bryant Pond.
*Kilburn, Frank, Presque Isle.

MARYLAND

†Buck, Jefferies, Baltimore.
*Fitzhugh, H. M., Westminster.
*Hodgson, H. W., Cumberland.
Legg, T. H., Union Bridge.
Leopold, E. J., Baltimore.
*Shull, J. D., Baltimore.

V 53
1909

MASSACHUSETTS

Anthony, J. C., Springfield.
Bellchumeur, D. S., Lowell.
Broderick, F. P., Jamaica Plain.
Carey, R. W., Fitchburg.
†Deems, O. M., Springfield.
Fuller, C. B., Waltham.
Kilbourn, A. G., Groton.
†Maloney, D. W., Watertown.
McCarthy, E. A., Fall River.
McKibben, W. W., Worcester.
Morrison, A. B., Boston.
Pettey, J. A., Brockton.
Thompson, F. H., Jr., Fitchburg.
Wernick, B. G., Boston.

MICHIGAN

Baskett, G. T., Ann Arbor.
Berggren, T. J., Battle Creek.
*Black, J. C., Milford.
†Fluemer, O. C., Mt. Clemens.
Macqueen, D. K., Laurium.
Madajesky, E. H., Bessemer.
†Maguire, F. J. W., Detroit.
Mates, E. L., Dowagiac.
†McVeigh, J. A., Detroit.
*Miller, E. C., Detroit.
Parker, W. T., Corunna.
Ribbeck, W. A., Addison.
Ulbrich, H. L., Detroit.

MINNESOTA

Collins, A. N., Austin.
Hill, H. W., Minneapolis.
†Moe, A. J., Heron Lake.
Oberg, C. M., Minneapolis.
Rodgers, C. L., Minneapolis.

MISSISSIPPI

Howard, L. H., Kosciusko.

MISSOURI

Bulkley, J. F., La Plata.
†Carter, J. J., Weston.
Chastain, C. W., Plattsburg.
Goodson, W. H., Liberty.
Lemmon, G. B., Springfield.
*Miller, R. F., St. Louis.
Mosher, G. C., Kansas City.
Richter, Geo., St. Louis.
Rohlfing, H. A. L., St. Louis.
Southern, J. N., Monroe City.
Thumser, Lawrence, St. Louis.
Vinyard, Paul, St. Louis.
Weiss, William, St. Louis.

MONTANA

Lakey, W. J., Kendall.
Loomis, E. A., Somers.
Owens, R. L., Hamilton.

NEBRASKA

Crook, Roy, Winnetoon.
Johnson, C. C., Creighton.
Lieber, Chas., Omaha.
Walker, G. H., Lincoln.

NEVADA

Ballance, W. P., Searchlight.
Barbee, C. M., Goldfield.

NEW HAMPSHIRE

Fraser, S., Wentworth.

NEW JERSEY

Bush, A. C., Verona.
Craig, J. M., Lakewood.
†Cregar, P. B., Plainfield.
Day, H. V., Butler.
Frace, P. W., Hoboken.
*Henry, F. C., Perth Amboy.
†Jenifer, Dani. of St. Thos., Atlantic City.
*King, G. W., Secaucus.
†Lamson, W. J., Summit.
*Leavitt, J. F., Camden.
†MacDowall, J. D., Perth Amboy.
*Mahaffey, J. L., Camden.
†Matson, W. M., Atlantic City.
*Mitchell, A. J., Newark.
Rose, H. L., Camden.
†Rosenwasser, C. A., Newark.
Schuck, T. J., Hoboken.
*Shangle, M. A., Elizabeth.
†Van Cranken, G., Passaic.
*Ware, F. V., Millville.
*Wells, J. M., Trenton.

NEW MEXICO

†Cook, J. O., Taos.
†Cornish, P. G., Albuquerque.
†Lukens, C. E., Albuquerque.

NEW YORK

*Andrews, L. M., Warsaw.
*Bates, J. F., Setauket.
Bayliss, F. P., Utica.
Bernstein, H. A., New York City.
*Bogue, F. L., New York City.
*Boyce, J. N., Stanfordville.
†Brown, C. M., Buffalo.
†Bryant, H. A., Schenectady.
Chamberlain, A. R., New York City.
Cohn, Louis, New York City.
†Collins, J. H., Schenectady.
†Cunningham, J. A., Brooklyn.
*Hanse, Charles, Elmira.
Heilman, A. M., New York City.
Huntley, J. F., Oneida.
Imperatori, C. J., New York City.
*Johnson, B. C., Buffalo.
Kosak, F. F., New York City.
Lang, Ludwig, New York City.
†Le Brun, Louis, Albany.
Lehman, Max, Glendale.
Locke, H. G., Syracuse.
*Maben, B. W., Kingston.
MacEvitt, James, Brooklyn.
†McParthon, Peter, Schenectady.
Morrison, J. F., Brooklyn.
Mynderse, H. V., Schenectady.
*O'Brien, D. D., Oswego.
†Phelps, A. W., East Aurora.
†Richards, C. A., Dunkirk.
Rickard, W. L., Brooklyn.
Samorini, A. A., Schenectady.
†Shannon, J. R., New York City.
*Shipman, E. W., New York City.
Silliman, G. S., Westbury.
*Slee, Richard, Nanuet.
Snyder, W. H., Newburgh.
Stark, G. W., Syracuse.
†Steen, W. L., New York City.
Steinhardt, I. D., New York City.
Thro, W. C., New York City.
†Wallace, G. B., New York City.
†Warren, J. S., New York City.
Wilcox, H. B., New York City.
Wilson, E. R., Brooklyn.
Woodhouse, F. E., Elmira.
*Yankauer, G. G. Prior, New York City.
Zwetsch, J. D., Gowanda.

NORTH CAROLINA

†Brantly, H., Spring Hope.
†Brookshire, H. G., Asheville.
†Calloway, A. W., Asheville.
*Halsey, B. F., Roper.
†King, R. M., Concord.
†Turner, J. P., Greensboro.

NORTH DAKOTA

*Brandt, A. M., Bismarck.
Marsden, C. S., Grand Forks.
Mayland, L. L., Rydes.
Thyng, D. K., Willow City.

OHIO

†Berghausen, Oscar, Cincinnati.
*Bratton, H. O., Columbus.
Chamberlain, W. P., Cleveland.
*Davis, D. W., Wellston.
*Dowling, Francis, Cincinnati.
Gudenkauf, A. R., Sidney.
†Heller, F. S., Oak Harbor.
Hill, J. E., Akron.
Huffman, O. V., Dayton.
Hull, W. H., Cincinnati.
Kuta, F. J., Cleveland.
*Osborne, H. M., Youngstown.
†Quayle, J. H., Cleveland.
Remy, T. H., Hanging Rock.
*Schaeffer, G. C., Columbus.

OKLAHOMA

Ambrosewf, S. A., Muskogee.
Hollingsworth, J. E., Spavinaw.
Hughson, F. L., Centralia.

PENNSYLVANIA

Armstrong, W. J., Kane.
Beck, F. W., Girard.
Bender, E. C., Philadelphia.
Betts, W. W., Chadds Ford.
Blair, W. W., Pittsburg.
Bogart, A. E., Philadelphia.
Brace, R. W., Philadelphia.
Bricker, E. B., Lititz.
Burkett, J. W., Mount Run.
*Carrier, Frederic, Philadelphia.
Cisna, W. R., Ickesburg.
†Clapp, G. H., Philadelphia.
Clifford, E. M., Greensburg.
Cross, G. H., Chester.
Davis, J. L., Philadelphia.
*Eisenhower, C. W., Jacobus.
Enoch, G. F., Philadelphia.
*Funke, John, Philadelphia.
*Gaughan, M. C., Pittston.
*Gilliland, C. J., Sharon.
*Hazlett, E. M., Washington.
*Heller, C. E., Williamsport.
*Henritzy, O. E., Slatington.
†Howe, William, Shingle House.
†Huber, G. W., Scranton.
*Hunter, J. R. W., Lewistown.
†Hutton, F. C., Philadelphia.
†Kennedy, D. J., Philadelphia.
*Laws, G. M., Philadelphia.
†LeFevre, R. E., Reading.
†Leopold, Samuel, Philadelphia.
†Lownes, J. B., Philadelphia.
†Luburg, L. F., Philadelphia.
†MacCarrell, D. R., Philadelphia.
*McAninch, D. L., Lamartine.
†McGlenn, J. A., Philadelphia.
McLaughlin, P. A., Kingston.
Meller, Howard, Philadelphia.
Mencke, J. B., Philadelphia.
*Milnor, R. H., Warrensville.
†Moore, J. G., Philadelphia.
†Murray, J. H., Reynoldsville.
Penrose, T. W., Philadelphia.
†Popp, J. M., New Castle.
†Pratt, C. H., Philadelphia.
†Schaubel, C. W., Philadelphia.
†deSchweinitz, G. L., Philadelphia.
Shoemaker, A. M., White Haven.
*Shuman, Ambrose, Catawissa.
*Sutton, H. A., Philadelphia.
Vermilyea, C. S., Russell.
Weyant, H. W., Philadelphia.
Wheeler, A. C., Erie.
White, E. P. C., Norristown.
*Winnebrake, A. J., Scranton.
Wright, H. A., Puritan.

RHODE ISLAND

*Irvine, W. L., Newport.

SOUTH CAROLINA

Edwards, H. A., Latta.

SOUTH DAKOTA

Griffin, M. E., Mitchell.

TENNESSEE

Binkley, D. C., Denver.
Capell, John, Chattanooga.
Cochrane, H. P., Franklin.
Edwards, J. L., Brownsville.
Hayden, E. Forrest, Nashville.
Hunt, E., St., Bethlehem.
Littlejohn, Alice, Memphis.
Neas, A. J., Parrottsville.
Toombs, Percy W., Memphis.
Wood, J. O., Morristown.
Yancey, S. M., Dayton.

TEXAS

Ashby, D. S., Amarillo.
†Davis, J. S., Blooming Grove.
Fitzpatrick, W. W., Paris.
Hanks, J. M., Blum.
Hilburn, R. E., Antelope.
†Kennedy, A. B., Bonham.
Mynatt, A. J., Houston.
Rush, H. P., Stanford.
Starker, C. T., El Paso.

UTAH

Steiner, J. J., Richfield.

VERMONT

Buttles, E. H., Burlington.

VIRGINIA

Armentrout, J. F., Staunton.
Chelf, H. T., Culpeper.
Coleman, D. J., Richmond.
*Fowlkes, F. V., Burkville.
Freed, J. W., Waynesboro.
†Freeman, A. W., Richmond.
McCulloch, J. H., Richmond.
*Moomaw, R. C., Ronnoke.
Pretlow, R. H., Suffolk.
Rea, M. L., Charlottesville.
Richardson, T. S., Waynesboro.
Thomasson, D. M., Lynchburg.
Thornhill, W. B., Lynchburg.

WASHINGTON

Chessman, F. N., Seattle.
†Cunningham, J. G., Spokane.
Kelley, E. R., Seattle.
Lambert, S. E., Spokane.
O'Shea, T. H., Spokane.
Snoke, J. W., Ft. Stellacoom.

WEST VIRGINIA

Anderson, J. H., Marytown.
Fortney, C. S., Sutherred.
*Fox, J. F., Bluefield.
Gruber, M. F., Helvetia.
Klase, W. N., Carbondale.
Littlefield, J. F., Albert.
*Mason, S. M., Clarksburg.
*Spragg, S. L. S., Wheeling.
Talbott, L. W., Elkins.

WISCONSIN

Bauer, K. T., Kewaskum.
Bryant, W. V., Madison.
Burdick, A. F., Milwaukee.
†Cavanaugh, C. E., Milwaukee.
Egan, G. J., La Crosse.
*Kelly, W. W., Green Bay.
Kemp, J. S., Watertown.
Kremers, Alex., Milwaukee.
Matthews, J. R., Milwaukee.
Schmit, A. I., Beloit.
Smith, C. E., Beloit.
Towne, W. H., Shrocton.
Vedder, J. B., Marshfield.

WYOMING

Fox, G. A., Cheyenne.

MANILA, P. I.

*Gurney, S. C., Manila.
Rochester, A. S., Manila.

Marriages

JOHN A. ANDERSON, M.D., to Miss Josephine V. Barron, at Baltimore, June 9.

J. S. HEBB, JR., M.D., Baltimore, to Miss Ida Spranklin, at Baltimore, June 12.

JOSEPH A. MOORE, M.D., to Miss Helen R. Collins, both of Philadelphia, June 23.

T. FREDERIC DOESCHER, M.D., to Miss Emma Pendell, both of Albany, N. Y., June 22.

ELDON JESSE SMITH, M.D., to Miss Ethel Kate McMullen, both of Burwell, Neb., June 23.

PITT STEVENS WILSON, M.D., Negaunee, Mich., to Miss Una Potter of Grand Rapids, June 30.

REUBEN A. WALL, M.D., Baltimore, to Miss Mary Agnes Browne, at Pittsburg, Pa., June 16.

ROBERT BRUCE BLUE, M.D., Wichita, Kan., to Miss Harriette Veronica Read of Chicago, June 30.

LYNN MURRAY JONES, M.D., to Miss George Rosamond Boyer, both of Dayton, Ohio, June 30.

ERWIN STANER HOTTINGER, M.D., Chicago, Ill., to Miss Estelle M. Flanagan of St. Louis, June 19.

FRED ALBERT, M.D., Mason City, Iowa, to Miss Gertrude Giltins of Williamsburg, Iowa, June 18.

CHARLES WESLEY EVANS, M.D., Springfield, Ohio, to Miss Nellie Wiley at New Park, Pa., June 17.

WALTON H. HOPKINS, M.D., Annapolis Md., to Miss Lila Holmes Trenholm, at Baltimore, June 23.

MERRITT FLINT PHILLIPS, M.D., to Miss Elizabeth Gratz Tyler, at Sackett's Harbor, N. Y., June 23.

FREDERICK V. BEITLER, M.D., Halethorpe, Md., to Miss Daisy M. Carson of Baltimore, at Halethorpe, June 22.

DANIEL FRANCIS CROWLEY, M.D., Des Moines, Iowa, to Miss Rosemary Catherine Langdon of Omaha, Neb., June 22.

Deaths

Thomas Brady Greenley, M.D. University of Louisville (Ky.) 1846; a member of the American Medical Association for many years, and a charter member of the Mississippi Valley Medical Association; once president of the Kentucky State Medical Society; an honorary member of the Jefferson County (Ky.) Medical Society; and a member of the American Association of Railway Surgeons; for thirty years local surgeon for the Illinois Central Railroad; a practitioner of Meadow Lawn, Ky., for more than sixty years, and universally respected and beloved; died in St. Joseph's Infirmary, Louisville, June 25, from senile debility, aged 90.

John Wright, M.D. Medical College of Ohio, Cincinnati, 1854; formerly of Clinton, Ill.; a member of the American Medical Association; charter member of the Dewitt County (Ill.) Medical Society; a life member of the Illinois State Medical Society, and its president in 1890; surgeon of the One Hundred and Seventh Illinois Volunteer Infantry; and later brigade and division surgeon during the Civil War, died at his home in Long Beach, Cal., May 21, from heart disease, aged 83.

Quitman N. Kohnke, M.D. Tulane University of Louisiana, New Orleans, 1890; a member of the American Medical Association; for eight years president of the board of health and health officer of New Orleans; once a member of the city council; who figured conspicuously in the yellow-fever epidemic in New Orleans in 1905; died at his summer home in Covington, June 26, from cerebral hemorrhage, aged 51.

James McVean Mackall, M.D. Georgetown University, Washington, D. C., 1873; a member of the Medical Society of the District of Columbia; surgeon of the Third U. S. Cavalry during the Spanish-American War; an expert on yellow fever, and detailed for duty at Diaquiri, Cuba; died at his home in Washington, D. C., June 26, from debility, due to the extreme heat, aged 57.

Meigs Case, M.D. New York University, New York City, 1857; surgeon of the Forty-third New York Volunteer Infantry during the Civil War, and in charge of the Seminary Hospital, Hagerstown, for four months after the battle of Antietam; a lifelong resident of Oneonta, N. Y.; died at his home in that city, June 14, from heart disease, aged 72.

Francis Edward Fitzgerald, M.D. John A. Creighton Medical College, Omaha, 1901; a member of the Nebraska State Medical Association; professor of skin diseases in his alma mater from 1903 to 1904, and demonstrator of anatomy; visiting physician to St. Joseph's Hospital, Omaha; died at his home in Omaha, June 21, from tuberculosis, aged 37.

Warren Bourne Evans, M.D. State University of Iowa, Iowa City, 1873; mayor and postmaster of Dow City and Arion, Iowa; for several years coroner of Crawford county; and local U. S. pension examining surgeon; who had suffered from diabetes for fourteen years; died in Crofton, Neb., from cerebral hemorrhage, June 17, aged 65.

Samuel Biddell Tomlinson, M.D. Medical College of Ohio, Cincinnati, 1855; a pioneer practitioner of Cincinnati; and first secretary of the Cincinnati Academy of Medicine; surgeon in the Confederate Service during the Civil War; died at his home in Cincinnati, June 25, from senile debility, aged 77.

William M. Tomlinson, M.D. Transylvania University, Lexington, Ky., 1849; of Wilmette, Ill.; at one time a member of the Chicago Board of Health, and a member of the local board of U. S. Pension Examining Surgeons; was run over by a train at Wilmette and killed, June 28, aged 81.

Thomas P. Welch, M.D. Barnes Medical College, St. Louis, 1897; a member of the staff of the St. Petersburg (Fla.) Infirmary; surgeon of the First Missouri Infantry, U. S. V., during the Spanish-American War; died at his home in St. Petersburg, June 22, from heart disease, aged 36.

George H. Heron, M.D. Howard University, Washington, D. C., 1877; a veteran of the Civil War; for several years a clerk in the treasury department and pension office, Washington; died at his home in that city, June 27, from cerebral hemorrhage, aged 72.

John A. McGuire, M.D. Starling Medical College, Columbus, Ohio, 1881; of Santa Cruz, Cal.; a member of the Medical Society of the State of California; died suddenly from angina pectoris, while making a professional call at Twin Lakes, June 21, aged 68.

Alexander Wiley McClintock, M.D. Miami Medical College, Cincinnati, 1895; formerly of Cissna Park, Ill.; some-time member of the Ford-Iroquois Medical Society; died at his home near Phoenix, Ariz., June 17, from tuberculosis, aged 42.

Ambrose S. Everett, M.D. St. Louis College of Homeopathic Physicians and Surgeons, 1870; at one time physician of Arapahoe county, Colo.; a veteran of the Civil War; died at his home in Denver, June 24, from heart disease, aged 68.

John Weiszgerber, M.D. University of Pennsylvania, Philadelphia, 1889; a member of the Philadelphia County Medical Society; and a police surgeon of Philadelphia; died at his home in that city, June 23, from pneumonia, aged 43.

Ruel Stearns Gage, M.D. New York University, New York City, 1877; a member of the American Medical Association; for twenty-five years a leading practitioner of Newark, N. J.; died at his home in that city, June 27, aged 64.

John G. Van Schoiack, M.D. Eclectic Medical Institute, Cincinnati, 1861; of Ottawa, Kan.; for many years physician of Franklin county; died at the home of his son in Kansas City, June 19, from cerebral hemorrhage, aged 74.

Franklin Louis Meyers, M.D. Bellevue Hospital Medical College, New York City, 1887; formerly a member of the school board and a city physician of Newark, N. J.; died at his home, June 26, from heart disease, aged 55.

Ralph Detmer Woods, M.D. University of Pennsylvania, Philadelphia, 1907; a surgeon for the Carnegie Steel Company, Pittsburg; died at the West Penn Hospital in that city, June 23, from pneumonia, aged 30.

Wilfred Daniel McDonald, M.D. College of Physicians and Surgeons, Boston, 1908; of Roxbury, Mass.; was drowned while attempting a long distance swim at Woburn, Mass., June 27, aged 33.

Abraham H. Iler, M.D. Medical College of Ohio, Cincinnati, 1861; surgeon in the Federal service during the Civil War; died at his home in Blue Ball, Ohio, June 23, from senile debility, aged 88.

John H. Ruhl, M.D. University of Pennsylvania, Philadelphia, 1883; an eye, ear, nose and throat specialist of Middletown, Pa.; died at his home June 27, from rheumatic endocarditis, aged 49.

Walton S. Greene, M.D. University of Pennsylvania, Philadelphia, 1888; for three terms a member of the State Board of Health of Mississippi; died recently at his home in Aberdeen, aged 45.

James H. Thomas, M.D. University of Maryland, Baltimore, 1851; died at his home in Cabin Creek, near Hurlock, Md., June 20, from cerebral hemorrhage, aged 81.

Levi W. Carter, M.D. Hahnemann Medical College, Chicago, 1871; of Peoria; died at the Proctor Home in that city, June 23, from paralysis, aged 74.

V 53
1909

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

VITAL STATISTICS

CRESSY L. WILBUR, M.D.
Chief of the Division of Vital Statistics, Bureau of the Census
WASHINGTON, D. C.

A very high degree of interest continues to be manifested in the subject of vital statistics and the necessity for adequate registration laws as a part of the sanitary administration of the state. Bills for this purpose have been before the legislatures of seven states during the present year, and in five states more or less comprehensive registration laws have been passed.

Delaware: First in order, in Delaware, some amendatory legislation was enacted so that the provisions of the state law for the registration of deaths are now strictly in compliance with those recommended by the American Medical Association, the American Public Health Association, and the Bureau of Census. It may not be remembered that for a brief period Delaware was considered a registration state, but a test made of the completeness of registration under the old law proved that much less than the requisite number of deaths was actually registered. The amendments of the present law require the division of the three counties of the state into suitable local registration districts, each with a local registrar, and provide that the body of no dead person shall be interred or removed without the immediate filing of a certificate of death of the standard form and the issue of a

burial permit. I confidently expect that under the operation of this law Delaware will soon be entitled to admission as a registration state. The provisions relating to births and marriages were left unchanged, it being deemed wiser to secure their amendment after the new method of registration of deaths has proved a complete success in practice.

North Carolina: The year 1909 will always be memorable if our anticipations are realized, for the enactment of the first, fairly general registration law for deaths capable of giving accurate results in any of the southern states. I refer to the law passed by the recent legislature of North Carolina through the efforts of Doctor Lewis, which makes the requirement of burial permits compulsory for all municipalities of 1,000 population and over. The expectation is that, after the law has been effectively enforced for some time, it may be extended to the rural portion of the state. It is the first instance, however, of a general requirement applicable to all cities of a southern state, as our returns at present are based solely on the results of registration under municipal ordinances.

Missouri: The most notable result of the movement for better legislation is the enactment of a thoroughly comprehensive law for the registration of births and deaths in Missouri. This law follows closely the methods which have resulted in success in Pennsylvania and Ohio, and the state authorities are now engaged in the preliminary work of organization. As all practical registration officials know, there is many a difficulty to overcome in transmuting an adequate registration law into accurate registration returns, but I have confidence that for Missouri, as for Pennsylvania and Ohio, with an adequate registration law, the details of its operation will be worked out satisfactorily and we shall have a notable addition to the registration area as a result of the legislation during the present year.

Arizona: Through the energy of Dr. Godfrey a registration law has been passed also for the territory of Arizona, and very excellent blanks of the standard form for both births and deaths will soon be in use.

Tennessee: The remaining state in which a registration law has been passed during the present year in Tennessee. I have not available a certified copy of the act as passed, but from a copy of the bill which I understand was passed without material modification, I am very sorry to say that this is one of the old type of registration laws concerning whose usefulness or, rather, lack of usefulness, there can be no question of doubt. It provides for the discarded method of enumeration for births and deaths, for their return annually through the clerks of the county courts, and in general includes all of the worthless features of similar laws that have been tested and discarded in many states. It is unfortunate that such legislation should be enacted for it only makes more difficult the passage of a proper law. This is shown clearly in the effort made this year to secure a modern law for Illinois and perhaps also for Kansas. The fact that these states have laws at the present time whose imperfections are not well understood except by those who have given careful consideration to the subject undoubtedly hinders the passage of proper legislation.

In addition to the seven states to which I have referred, it is possible that some effort will be made to secure legislation in Georgia, whose legislature meets during the present month. For the first time in the history of the census an effort has been made to secure transcripts of all births registered in the United States based on the original returns in state and municipal offices. The resulting compilation will be for the year 1908 and will doubtless present data of interest and importance, although one of the principal services to be rendered by it will be to demonstrate clearly the very unsatisfactory condition of birth registration in this country. The return of transcripts of the original records of births will enable a system of checking and testing to be made by the Bureau of the Census, so that the relative amounts of deficiency in registration of births can be determined approximately for the various states. Should the results justify it and the registration be found sufficiently complete in any extended area, the regular annual compilation of births may be continued.

Society Proceedings

COMING MEETINGS

American Ophthalmological Assn., New London, Conn., July 14-15
British Columbia Med. Assn., Seattle, Wash., July 19.
Idaho State Medical Association, Seattle, Wash., July 19.
Oregon State Medical Association, Seattle, Wash., July 19.
Washington State Medical Association, Seattle, July 20.

RHODE ISLAND MEDICAL SOCIETY

Ninety-eighth Annual Meeting, held in Providence, June 1, 1909

The President, DR. FRANK B. FULLER, of Pawtucket, in the Chair

Officers Elected and Committees Appointed

The officers elected for the ensuing year were named in THE JOURNAL, June 12, p. 1935. The following committees were appointed: Committee of arrangements, Drs. F. E. Burdick, A. A. Barrows and J. B. Ferguson; committee on the library, Drs. G. D. Hersey, G. L. Collins, F. L. Day, G. S. Mathews and H. G. Partridge; committee on publications, Drs. G. D. Hersey, C. M. Godding and G. T. Swarts; committee on necrology, Drs. D. Churchill, E. E. Pierce and C. G. Hilliard; committee on legislation, state and American Medical Association, Drs. G. T. Swarts, W. F. Gleason, W. L. Munro, E. Kingman and S. A. Welch; building committee, Drs. J. W. Mitchell, R. F. Noyes, F. H. Peckham, F. T. Rogers and J. M. Peters; committee on education of the American Medical Association, for three years, Dr. C. V. Chapin.

Official Reports

The annual report of the secretary showed that the society had 392 members. Of these, 353 were active fellows, 28 nonresidents and 11 honorary.

The committee on library, through Dr. Hersey, chairman, reported that 319 bound volumes, 288 reprints and 312 pamphlets had been received.

The committee on legislation through Dr. Swarts, chairman, reported that during the year the optometry bill had become a law; the bill regulating the practice of osteopathy had failed; the fee of the medical examiners for a view had been increased from four to five dollars, and a law had been passed requiring physicians to report all cases of tuberculosis to the State Board of Health, beginning July 1, 1909. Dr. Swarts also said that since the visit of the committee of the American Medical Association to the medical schools of the country and their rating of them, no applicant to practice medicine in this state had been or would be examined unless he came from a school having a rating of 70 per cent. or more.

On invitation of Dr. John M. Peters, the Crawford Allen Ward of the Rhode Island Hospital, situated at Quidnessett, near East Greenwich, was selected as the place of the September meeting.

Essay Prizes Offered and Awarded

The trustees of the Chase-Wiggin Fund reported that for the year ending May 1, 1910, a prize of $50 is offered for the best popular essay on the subject of "Tobacco and Its Evil Effects on Those who Habitually Use It."

The trustees of the Fiske Fund reported that the prize of $200 offered for the best essay on the subject, "The Mode of Infection and the Duration of the Infectious Period in Scarlet Fever," had been awarded to Dr. Charles V. Chapin of Providence.

For 1910 a prize of $200 is offered for the best essay on the subject, "The Classification and Treatment of the Diseases Commonly Known as Rheumatism."

Treatment of Tuberculosis

DR. JAMES L. WHEATON, JR., Pawtucket: Many so-called modern ideas of the treatment of tuberculosis were practiced by the ancient Greeks, such as elevated places of residence and open air life. Socrates and Aristotle recognized contagiousness. The laws of the Talmud, 500 years before Christ, forbade the eating of tuberculous meat. During the dark ages we hear little of tuberculosis because the barbarians who overwhelmed civilization were open air dwellers and tuberculosis did not flourish among them. The search for a specific treatment has been long and has progressed only to the extent that tuberculin

is recognized as an adjunct in diagnosis. Most methods of treatment have helped but little, such methods as inoculation, hydrotherapy, inhalations, electricity or surgery. Climate helps, but care is needed in selection. Sanataria are of benefit but also need to be used with judgment. Inasmuch as most patients remain at home special clinics and district nursing are of great service. On the whole, we may assert that we have done little but cover the smoke while the fire rages underneath. We need to study allied problems. As tuberculosis is largely a disease of the poor, we must look at it from the poor man's position. Why may we not have committees of public-spirited men who will consider what laws should be enacted, what supervision of schools, what regulations of employments and over shops and tenements, and what educational methods regarding tuberculosis shall be employed?. Bring all methods into play in the spirit of cordial cooperation.

Working of the Medical Practice Act in Rhode Island in the Last Fourteen Years

DR. GARDNER T. SWARTS, Providence: The act regulating medicine in Rhode Island went into effect July 16, 1895. Before that time considerable work had been done by the Rhode Island Medical Society and others but without success. The law started with a time limit provision for those who had practiced five years, with the result that many are practicing today who were best excluded. It was thought that this class of men would soon die out, but the contrary has been the experience. Among those who receive certificates because they present diplomas there are constantly appearing men with like evil tendencies, especially abortionists. It may be stated in this connection that only one conviction has been secured in Rhode Island of an abortionist, and here the defendant confessed. After seven years' trial, the medical practice act was amended to require an examination of every applicant. The poorer students were found to come to Rhode Island and Massachusetts, where requirements were not so arduous as in many states. In 1908 a good deal was required, and since then the number of applicants has diminished and qualifications have improved. After the visit of the committee of the American Medical Association to the various medical schools and its rating of them, a requirement has been that the applicant must come from a school rated as over 70 per cent. Certain sects and special lines of practice are always asking for special legislation and the optometrists have succeeded. Midwives do harm, as cases prove. Peripatetic clinics prey on the public but are gone before evidence can be secured or used. A photograph of applicants to practice is required as substitution was formerly practiced. Residents just over the state line invade Rhode Island for a few hours. Advertisers need constant attention. Few changes have been made in the law but, rather, its provisions have been tested by time. The law has been administered not in spectacular ways but used as a deterrent to unlawful practices. While the executive officer of the board may have chafed in not having more perfect law and also under the sometimes seemingly singular interpretation of the laws by a higher court, yet the people of the state and the profession should, with the board, feel comforted to know that the working of the medical practice act has held improper practice of medicine within the safety line.

President's Address: Medical Progress During the Last Thirty Years

DR. FRANK B. FULLER, Pawtucket: The great change is the beginning of the establishment of scientific basis for many medical procedures and the hope that many more will follow. As a practicing physician, the one discovery that has impressed me is the work of Behring, Roux and others concerning diphtheria. Tuberculosis has been successfully attacked. The way of looking at it has changed for the better. Many new methods of treatment have sprung up. The mortality of rabies has greatly lessened. Tetanus has been aborted with timely injections. Epidemic cerebrospinal meningitis has been reduced in mortality three-fourths. In the South the discovery of the hookworm disease and its cure through the investigation of Dr. Stiles is of widespread importance. Preventive medicine has made wonderful progress in the destruction of carriers as mosquitoes, rats, flies and pests. Surgery has had a wonderful development. We are in advance in the possession of governmental and endowed institutions for scientific study. Special lines have become necessary with special laboratories. Compulsory scientific treatment will follow compulsory notification. Society already cares for the sick and unfortunate, and old age pensions are proposed. Regulation of water and food supplies, of dwellings, workshops and many other things is in progress. Diagnosis is more certain, more quickly made and satisfactory treatment applied. In the future, teachers of specialties will be more and more needed and perhaps paid regular salaries.

Doctors and Other Doctors

At the anniversary dinner, Dr. Edmund D. Chesebro presided. Ex-Governor Utter of Westerly, R. I., made an address in which he said that the average man had not that fear of the medical man that he once had. The time had come when the profession should inaugurate a movement to bring about the appointment by the court of three men to act as medical experts, not for the defense or for the prosecution, but for the state. Doctors are studying men more and medicine less. Medical men are builders of the Temple of God. The apostle goes one step further and says condemnation comes to him who mutilates the temple.

The Natural History of the Medical Man

REV. A. A. BERLE, D.D., Boston: The mystery of the medical profession is just beginning. Experience with 200,000 people who cross the threshold of my church and contact with humanity makes me believe that the mystery has not begun to be penetrated. The Christian Science movement is one of the gravest of menaces, undermining the soundness of thought of this generation. The next generation will reap the harvest. You members of the medical profession ought to speak out against it. Do not be deterred by the cry that you are speaking for your pockets' sake.

IOWA STATE MEDICAL SOCIETY

Fifty-Eighth Annual Session, held at Dubuque, May 19-21, 1909

The officers elected were given in THE JOURNAL, May 29, 1909, p. 1766.

President's Address: Stock Taking and Prospect

DR. C. F. WAHRER, Fort Madison, departed from the usual custom of giving advice for the benefit of an unappreciative public, but suggested that physicians take stock of their present ability to practice medicine under modern methods. He urged them to fit themselves by attending medical societies, postgraduate schools, by acquiring good libraries, and studying collateral and cognate sciences. He urged harmony among physicians and the culture of ethical ideals. He warned of the blighting influence of commercialism, which made nations drunk with its vaunted success, that strangled the Muses to death, and enthroned the Dollar in their place. Dr. Wahrer bewailed the fact that the heroes of science, of the laboratory, and of sanitation, who sacrificed their lives, no less than the soldier on the field of carnage, were not appreciated by the public. Few, if any, monuments were erected to them by a grateful people, and what praise was accorded was scantily and grudgingly given. The works of men like Rush, Virchow, Behring, Pasteur, Koch, Carroll and Reed and a host of others like them, surely compared favorably with those of Napoleon, Grant, Washington, Alexander, Wellington, Dewey, Cæsar and Cromwell; only the one class conserved life, the other destroyed it. He closed by admonishing all physicians to cultivate the friendship of the secular press, to prepare useful literature at times, and have it published by the papers that are read by thousands where medical journals are read by a few. He urged industry in all things relating to medicine because, as a rule, physicians were intellectually lazy. He recommended the course of study outlined by THE JOURNAL of the A. M. A., and asked physicians to add enthusiasm to industry. An enthusiasm supported by a united and high-minded profession was the golden key that would unlock the portals of Utopia. Like the prophecy of the seer whose vision was begotten by a high desire, like the poet whose dreams enabled him to see

V 53
1909

glimpses of Paradise, made bright by the torch of his genius, so Dr. Wahrer caught a far-distant view of the column of smoke by day and the beacon fires of the night, that blazed the paths to the Promised Land.

Pancreatitis

DR. D. C. BROCKMAN, Ottumwa: The importance of the diseases of the pancreas has not been understood by the average physician; hence many cases of this kind have been overlooked or mistreated for some other disease. The great majority of cases of acute pancreatitis are due to diseases of the bile passages, and can only be remedied by the proper treatment of the original condition. Here, as everywhere else, the first thing to do is to make a diagnosis; when the diagnosis is made and the pathology understood, there will be no question about the line of treatment to pursue. In chronic pancreatitis the majority of cases are either not diagnosed at all, or erroneously diagnosed as cancer, and the patients allowed to die without treatment. Unfortunately, the diagnosis can not be made from the outside; exploratory incision is required, located so that if the trouble is inflammatory, proper curative treatment may be instituted through the same incision. The treatment of either the acute or duodenal type of the disease may be summed up briefly in one word, "drainage" of the bile passage.

Bacterial Vaccines

DR. HENRY ALBERT, Iowa City, dealt principally with a review of the various conditions in which vaccines have been used for prophylaxis and treatment. He presented statistics to show how preventive inoculation had influenced the incidence and mortality of typhoid fever, and urged particularly the trial of this method in the early part of epidemics of typhoid fever, when a large number of persons were known to have been exposed to infection. He also believed it should be given a trial in treatment of chronic typhoid bacilli carriers. Although autogenous vaccines were given the preference over stock vaccines, the use of the latter was urged when it was difficult to secure autogenous vaccines, as in tuberculosis and chronic gonorrhea, or when it was not desirable to wait for the preparation of the autogenous ones, as in some of the acute conditions. Dr. Albert had little faith in the opsonic index as a routine method of controlling the size of the dose and frequency of treatment. He urged that careful studies be made to determine if the symptoms of intolerance recognized in connection with tuberculin therapy do not find greater parallelism in connection with the newer bacterial therapy than has heretofore been believed to be the case.

Oration on Medicine: The Old and the New Medicine

DR. G. E. CRAWFORD, Cedar Rapids: The title of this paper assumes that there is in our profession of medicine that which is old and that which is new. When we undertake to study the history of almost any subject we are impressed with the fact that much that is supposed to be new is in reality old, and much that is old is new, in that we see it with a new understanding and association. An old science may be said to have become new when it comes to be based on newly discovered principles which are fundamental in character. The foundations of the new medicine are metabolism and immunity. In the light of these discoveries, diseases divide themselves essentially into two classes: derangements of metabolism and infections. With this view of metabolism, and the important part the pituitary-adrenal-thyroid system, with the internal secretions, performs in these most intricate processes, it is the problem of the new medicine to assist Nature in maintaining the equilibrium of these vital movements. In infections, "immunizing medication is the foundation of rational therapeutics"—a therapeutics which can govern the efficiency of the defensive mechanism of the body. The old medicine is the collaborated empiricism of the ages. The new medicine is the dawn of scientific rationalism. We are only at the beginning. What we need is a constructive therapeutics in accordance with these new principles. While we as yet are obliged to practice largely in the old, we think in the new, and look forward to the time when all of these processes will be as completely under our control as some of them are now.

Oration on Surgery: The Seamy Side of Surgery

DR. G. G. COTTAM, Rock Rapids, analyzed his subject both from the scientific and economic standpoints. He dwelt on the various accidents, complications and other untoward sequels of operation, emphasizing the deplorable lack of adequate training and fitness in many who undertake to do major surgery, and the present-day tendency toward ultra-specialism, which makes a surgeon little else than a skilled technician. The surgeon should never cease to be a practical pathologist or lose his contact with general medical diagnosis, since so many surgical conditions merge into the medical and *vice versa*. These considerations apply especially to surgeons in an agricultural state like Iowa, where the peculiarities of geographical distribution of population over a large area prevent the constant close association of surgeon, physician and pathologist. He deprecated the prevalent leaning to lowering of professional standards in surgery, as shown by various commercialistic tendencies, for which there seems to be no adequate remedy save enlightenment of the public for the present and elevation of general professional ideas for the future.

Dysmenorrhea

DR. CARL F. WAHRER, Fort Madison: The unsatisfactory results of treatment in dysmenorrhea are usually in those cases of nervous origin in young women. When definitely associated with pathologic changes in the pelvis, dysmenorrhea is easily relieved. The conditions most often found accompanying it are retrodisplacements in nulliparæ, chronic gonorrheal salpingitis and fibroid tumors of the uterus. Retrodisplacement is not so apt to cause dysmenorrhea in women who have borne children. From one-third to one-half of all cases seen in general practice are in young girls who have no abnormal changes in the pelvis. These cases are due to hysteria and neurasthenia, and should be treated as such. Dilatation and curettement are not justifiable in these patients, except in a small few in whom the pain is almost entirely relieved when the flow begins.

DISCUSSION

DR. M. J. KENEFICK, Algona: This is one of the most practical subjects that could be brought up, for dysmenorrhea is a very common complaint and one that gives us a great deal of annoyance in the treatment. If we submit some young women suffering from dysmenorrhea to pelvic examination and direct their attention to the pelvic organs, we are very likely to get them into a state of hypochondria, and then they will read the "patent-medicine" literature and take Lydia Pinkham's compound, and go on from bad to worse.

DR. G. H. SKINNER, Cedar Rapids: The neuralgic forms of dysmenorrhea can not be treated or benefited by any plan of surgical procedure. It may be relieved in a great many cases by repeated curettage and dilatation, but I believe that more can be done with what is called obstructed dysmenorrhea and neuralgic dysmenorrhea by hygienic treatment, change of climate, etc., than by all other means combined. Two-thirds of the graduates of our high schools have dysmenorrhea, and with a great many it is hemorrhagic. The less one meddles with the pelvic organs the better it will be.

DR. J. W. OSBORN, Des Moines: I think medicinal treatment is neglected, and that if we would study our therapeutics as well as our patients, many girls now subjected to dilatation and curettage would not require it.

(*To be continued*)

AMERICAN PEDIATRIC SOCIETY

Annual Meeting, held at Lenox, Mass., May 27-28, 1909

Considerations Concerning Scarlet Fever, Rubella Scarlatinosa and Duke's Disease

(*Concluded from page 72*)

DR. D. J. MILTON MILLER, Atlantic City, thought the recognition of a new exanthem would be very confusing and that it had not been proved. German measles he considered a rare disease. Practitioners should be impressed with the fact that scarlet fever may occur with the mildest symptoms and he advised treating all these cases as scarlet fever until desquamation occurred, and called attention to the mildness

of scarlet fever at the present day. He thought this explained the condition of rubella scarlatinosa. He desired to show that there was a disease which was a scarlatinous rubella which so closely resembled scarlet fever that in isolated cases it was impossible to make a diagnosis and that the cases should be treated as scarlet fever for the protection of the public.

DISCUSSION

DR. J. P. CROZER GRIFFITH, Philadelphia, had seen cases of scarlet fever without the strawberry tongue and thought that measles occurred more rarely the second time than does scarlet fever.

DR. HENRY KOPLIK, New York, thought second attacks of scarlet fever possible though rare and referred to recorded cases of measles of a very mild nature. He agreed with Dr. Miller that in practice it was better to assume that a case was scarlet fever no matter how mild the eruption.

DR. HENRY SHAW, Albany, referred to an epidemic of mild scarlet fever at Round Lake in which it had not been deemed necessary to quarantine. He had recently seen a boy of 15 with a very acute rash and found that he had had four other attacks since going to school in each of which he had been quarantined.

DR. SAMUEL S. ADAMS, Washington, thought it rare that a second attack of scarlet fever occurred in the same individual although the history would often seem to indicate it.

DR. R. G. FREEMAN, New York, thought that in a questionable diagnosis between scarlet fever and German measles it was best to assume that it was scarlet fever; he had seen an epidemic with very slight symptoms followed by bad complications.

DR. THOMAS MORGAN ROTCH, Boston, had never seen a recurrent scarlet fever and felt that it must be quite rare.

DR. ISAAC ABT, Chicago, had diagnosed scarlet fever twice in the same individual. He was in accord with Dr. Miller that the cases which closely resemble scarlet fever had better be so called.

DR. T. S. SOUTHWORTH, New York, thought all such cases should be quarantined until the physician could be absolutely sure.

DR. ALFRED HAND, Philadelphia, agreed with Dr. Miller and did not attach much importance to the absence of desquamation in private practice.

DR. J. P. CROZER GRIFFITH, Philadelphia, had seen two attacks of scarlet fever in the same patient without doubt.

The Stools of the New-Born and Their Significance

DR. THOMAS S. SOUTHWORTH, New York: I disagree with the present day teaching that for a period varying from 3 to 5 days the meconium gives way to yellow or orange yellow stools and that these are of a uniform homogeneous semi-solid consistence and that this is the normal stool and that any departure from this classical type indicates a disturbance of digestion on the part of the infant. Statistics of 50 infants successfully breast-fed were given from which he concluded that the clasical orange-yellow, semisolid stools appear in the majority of infants later than is usually stated. Considerable variation in the color and consistency of the stools of newborn infants are entirely compatible with regular gains in weight. Such variations in stools for ten days or more, even with slow or irregular gains in weight, give no certain indications that successful breast feeding can not be carried on. Whatever the character of the stools weaning is not indicated if the infant is gaining steadily in weight.

DISCUSSION

DR. J. L. MORSE, Boston, thought the variations in the stools often depended on changes in the breast milk and on the relation between the amount of fat and the amount of proteids.

DR. J. P. CROZER GRIFFITH, Philadelphia, agreed with Dr. Southworth that the infant's general condition of health and gain is of more importance than the character of the stools. Change in the stools might give a warning, but was not an indication to stop the feeding.

DR. R. G. FREEMAN, New York, was also in accord with Dr. Southworth and thought if the baby were gaining in weight the matter of change in the stools could be ignored.

The Urine in the Gastrointestinal Diseases of Infancy

DR. JOHN LOVETT MORSE, Boston, reported that 300 cases were examined as to the frequency of albuminuria in these conditions, and he concluded that albuminuria was found in 8 or 10 per cent. of babies ill with various diseases of the gastrointestinal tract; more often in the acute than in the chronic cases. In the chronic cases, there was no relation between the albuminuria and the symptomatology. The presence of albuminuria in an individual case did not materially affect the prognosis.

DISCUSSION

DR. HENRY KOPLIK, New York, agreed with Dr. Morse and thought the condition simply one of the manifestations of the general toxemia.

DR. MILLER, Atlantic City, had observed that in cases of chronic diarrhea seen in the hospital there had been the presence of a small amount of albumin without any apparent nephritis in the course of the disease. He thought it was of significance only as showing the intensity of the toxemia.

The Irritating Effects of Cathartic Drugs on the Intestinal Mucosa

DR. ISAAC A. ABT, Chicago: Experiments were made to determine the irritating effects of the common cathartics on the intestinal mucosa of infants. The benzidin test was used for blood. Calomel, magnesium sulphate and castor oil were the cathartics given. Both blood and mucus were shown in the stools after several days. Calomel seemed to produce the greatest amount of irritation and castor oil the least.

Abnormal Development of the Bones

DR. BLACKADDER, Montreal, exhibited a sketch of a case of great abnormal development of the large bones, with *x*-ray plates showing peculiar arching of the bones. The circumference of each wrist at the joint was 3½ inches and over the swelling 4¾ inches. The length of the foot was 5 inches. The child weighed 24 pounds and was 3 years old.

Soy Beans in Infant Feeding; Preliminary Report

DR. JOHN RUHRÄH, Baltimore, thought soy beans would be of advantage in certain kinds of feeding, as in diabetes. These beans were used very much in China and Japan. They contained less starch than any other diabetic food, furnished a food easily digested and easily assimilated. They could be used in marasmus and summer disorders and diarrheas.

AMERICAN SURGICAL ASSOCIATION

Annual Meeting held at Philadelphia, June 3-5, 1909

(*Continued from page 70*)

The Fecal Origin of Some Forms of Postoperative Tetanus and Its Prophylaxis by Proper Dietetic or Culinary Measure

DR. RUDOLPH MATAS, New Orleans, drew conclusions which may be summarized practically as follows: Postoperative deaths from this form of tetanus occur in seemingly clean surgical cases. The origin and regional distribution of accidental and postoperative tetanus in the concealed parts of the body (protected from surface exposure) has not been sufficiently investigated or recognized, certainly not sufficiently insisted on in accounting for postoperative deaths in which the rules of surgical asepsis have been apparently well observed. Experience has shown that while the risk of tetanus infection can be absolutely eliminated in all operations on sterile tissues in which a rigorous postoperative asepsis can be maintained until healing has occurred, this liability can not be removed in those regions in which postoperative asepsis can not be secured; for example, the extremities and the anorectal region. The occasional postoperative deaths, which occur from time to time, are not dependent on defects of technic or contaminated material, *e. g.*, imperfectly sterilized catgut, but to other sources of infection outside of, and apart from, the operation.

V 53
1909

This hitherto unrecognized or disregarded factor in the causation of postoperative tetanus is the direct contamination of the alimentary canal and its contents with living tetanus bacilli and their spores, swallowed in raw, uncooked vegetables, berries and other fruits which are cultivated in fertilized or manured, *i. e.*, tetanized soil. It may be a mere coincidence, but it is a fact, that in all the cases of postoperative tetanus occurring after operations in regions liable to fecal contact, which I have investigated (two in my own practice), the patients had eaten copiously of uncooked vegetables—celery, lettuce, chicory, watercress, cabbage (cold slaw), radishes, turnips, carrots, tomatoes and other green vegetables, strawberries, blackberries and other berries and fruits which are grown in the soil or brought in contact with it. The tetanus bacillus and its spores survive the passage through the intestinal canal of the domesticated animals, especially the herbivorous horse and cow, and the dung of these animals is a perpetual culture medium for the tetanus bacillus, swallowed constantly with the grass of the pasture and the fodder of the stable; not only are the bacilli ejected alive, but their virulence and activity are probably intensified by their temporary residence in the favorable conditions of the lower intestinal tract. Of normal men, 5 per cent. harbor the tetanus bacillus or its spores in an active state in the intestinal canal, and of hostlers, dairymen, etc., 20 per cent. In accordance with the preceding statements, and my convictions, I have taught and insisted that no patient should be brought to operation without antitetanic preparation, whenever an operation is to be performed on parts in which fecal contamination is unavoidable (hemorrhoids, fissure, fistula, stricture, etc.). This antitetanic preparation is very simple and consists of: (a) purgation three days before the operation; (b) the suppression of all raw, uncooked food, especially green vegetables, berries and other fruit for the same period of time before the operation. In emergencies, when dietetic preparation is impossible, 10 c.c. of tetanus antitoxin are injected subcutaneously at the time of the operation, while the patient is still under the anesthetic.

DISCUSSION

DR. JOHN E. OWENS, Chicago: A few years ago I saw a woman, past middle age, suffering from tetanus. She had no appearance of a wound; but two or three days before consulting me she had a tooth pulled. Before the attack of tetanus began she had been eating celery, of which she was very fond, and I have no doubt the attack resulted from eating the uncooked celery.

DR. NATHAN JACOBSON, Syracuse, N. Y.: I recall one case in which tetanus developed after an operation for hemorrhoids, which was performed by a so-called rectal specialist, the so-called injection method having been resorted to. It was thought the tetanus was due to carbolic acid or to the ligature material that was used. In other cases of tetanus I have seen following operations on the anorectal region, trismus was a late manifestation.

DR. W. H. HUTCHINGS, Detroit: I have treated three cases of postoperative tetanus. In one the tetanus followed an abortion. In the other tetanus followed injuries to the hand. In a third tetanus followed an apparently clean operation for suprapubic shortening of the round ligaments. It developed twelve days after operation; but the wound healed by primary intention. All three patients recovered.

DR. JOSEPH RANSOHOFF, Cincinnati: A few years ago I did considerable anorectal work, but only saw one case of postoperative tetanus, and that was in the practice of a colleague. The patient had been curetted, and fuming nitric acid introduced into the uterus. Acute tetanus developed; but there was not trismus, but an open mouth, a symptom I had not seen before. In every case the alimentary tract should be thoroughly emptied.

DR. MAURICE H. RICHARDSON, Boston: I have never seen a case of postoperative tetanus. It must be very rare when we consider infections through the alimentary canal, as acute appendicitis cases, enterostomies, and other operations by which the large intestine is opened.

DR. ARTHUR DEAN BEVAN, Chicago: Is it not possible that tetanus varies considerably in different localities?

DR. ARPAD G. GERSTER, New York: In thirty-two years of surgical practice in two hospitals I have not seen a single instance of postoperative tetanus.

DR. BEVERLY MACMONAGLE, San Francisco: In an experience extending over thirty ears I have seen but one case of tetanus following operation. In this case a trachelorrhaphy was done; catgut was used, and I have no doubt infection came from the catgut. I have operated in the houses of Italians and Spanish, where they have a horse or a pig, or cow adjoining their rooms, yet I have not had a case of infection from the tetanus bacillus in any of those bad surroundings.

DR. F. H. GERRISH, Portland, Me.: Twenty-five years ago I had in close proximity to each other two cases of postoperative tetanus. One patient was a child in the teens, and tetanus followed an operation for necrosis of the tibia; in the other patient tetanus developed after ligation of hemorrhoids. Tetanus seems to come in waves. In the year these two cases occurred tetanus was prevalent. Three years ago in the hospital with which I am connected there were sixteen cases of tetanus in the course of eighteen months, and there is still doubt as to the occasion for those cases.

DR. J. COLLINS WARREN, Boston: It ought to be said in this discussion that tetanus is to a certain extent a tropical disease; that latitude has some influence on the growth of the bacillus of tetanus, and that in the tropics it grows more luxuriantly than in temperate zones.

DR. S. STILLMAN, San Francisco: I can see how there is danger of tetanus developing after ligature operations for hemorrhoids. That was the experience of Lane in the navy on the Pacific Coast, at Panama, and in the early days in San Francisco. The danger was a real one at that time, and his experience was extensive in those days. Tetanus also occurred in my work a number of times, but no particular precautions were taken to guard against it developing.

DR. ALBERT VANDER VEER, Albany, N. Y.: My experience does not bring to my mind a single case of tetanus in connection with operations on the rectum. The cases of tetanus I saw in army practice generally resulted from shell wounds in which a great deal of dirt was carried into the wounds.

DR. GEORGE E. BREWER, New York: I see no objection to using serum as a prophylactic in these cases. It is used at the Roosevelt Hospital in all cases of injuries to the hands and feet. Seven years ago sixteen cases of tetanus occurred in about two months in the summer following injuries of the hands and feet, and after that it was made a definite rule to give such patients an immunizing dose of antitoxin, and since that practice has been adopted no case of tetanus has developed there.

DR. DUDLEY P. ALLEN, Cleveland, Ohio: There have been a number of cases of tetanus at the Lakeside Hospital in Cleveland from the use of toy pistols. In every case in which the wound was opened early and packed the patient recovered. The patients whose wounds were not opened early and packed died.

DR. C. B. G. DE NANCREDE, Ann Arbor: There are certain sections of the country where tetanus is unknown, while in others a few miles distant the disease is rife; at least, the germs of the disease can be found in the soil. For the past eleven years in my lectures I have warned my students about the dangers of unripe fruit as a possible source of tetanus.

DR. ROBERT G. LE CONTE, Philadelphia: Fifteen years ago tetanus developed in a patient operated on by a colleague in this city. The disease developed on the eighth day following an operation on the perineum, and resulted in death. At the Pennsylvania Hospital there formerly were a number of cases of tetanus, but since it has been made a rule to give patients with injuries of the hands and feet, or patients with suspicious looking wounds, an immunizing dose of the antitetanic serum tetanus has not developed.

DR. R. MATAS: At the Charity Hospital, New Orleans, there is no case of railroad injury that is contaminated with dirt in which the patient is not given antitoxin or antitetanic serum. Nearer the tropics the prevalence of tetanus increases. It is less prevalent in northern than southern latitudes.

(To be continued)

Medicolegal

Varicose Veins from Contusion—Care of Wound—Ordering of Physical Examinations

The Supreme Court of Nevada says, in the personal injury case of Murphy vs. Southern Pacific Company, that the defendant company contended that the only injury sustained by the plaintiff as the result of the collision he was in was an inconsequential bruise on his left leg, which, with ordinary care and attention, would have healed without any appreciable injury, and that the varicose veins from which he was suffering were brought on by septic poisoning that resulted from his lack of care in the interim between the time of the accident and the time of the trial, etc. Five gentlemen of the medical profession were examined as witnesses, from all of whom expert testimony was exacted on the causes likely to produce varicose veins, and as to whether or not the varicosity of the veins from which the plaintiff was suffering was directly attributable to the accident or to the septic poisoning, or neglect of the plaintiff after the accident. From the testimony of one eminent physician, whose testimony was not disputed by any of the other medical experts called in this case, it appeared that varicosity could be produced from pressure on the veins, and evidently the jury, in considering the accident, after hearing all of this testimony, concluded that the varicosity from which the plaintiff was suffering was due directly to the contusion which resulted to him at the time of the accident, and not from any negligence on his part.

Conceding that the plaintiff, immediately after the accident, did not take the best of care and did not secure the best medical assistance in the treatment of the wound, it did not follow that he was to be deprived of damages because of his failure to secure attention to the degree of care named. Evidence was disclosed that he used his best judgment in caring for the wound received at the time, and that he gave it such medical attention as he believed it was entitled to. Where there is such a disagreement of medical opinion as to what might cause varicosity of the veins, it would be more than presumption to expect a common layman to believe that from a contusion the serious consequences which he was later suffering could follow. The evidence preponderated to the effect that at the the time of the accident the plaintiff was not afflicted with the malady affecting the limb in question, but it did appear that shortly thereafter varicose veins appeared and caused the plaintiff the intense suffering and injury of which he was complaining. Every man is differently constituted physically, and what might affect one individual might not have any damaging effect on the other. And so the jury in the present case, after listening to the medical testimony introduced, and all the evidence and facts adduced, believed, in their judgment, that these varicose veins were directly attributable to the accident occasioned by the negligence of the defendant.

Innumerable authorities can be produced where persons, through neglect, have brought on different diseases, and in many cases death, which are manifestly not attributable to an accident. But in the present case the court believes the evidence justified a verdict of the jury believing that varicosity could and did affect the plaintiff as a direct result of the injury complained of. Every case of this character, as has been well said on numerous occasions by courts considering questions such as the one under discussion, must be governed and controlled by the particular fact of each case.

With regard to compelling the plaintiff to submit to a physical examination by physicians, the court thinks that the reasons and principles advanced in those opinions which sustain the power of the trial court to order a physical examination in cases of this character, and which repose such power in the sound discretion of the trial court, to be sound in law and in furtherance of the ends of justice. The purpose of allowing this examination is to prevent a defendant from being subjected to fraudulent, assumed and dishonest claims, and the court believes that the defendant should be protected in every way from any imposition which may be perpetrated by plaintiffs in suits of this character against them. But there is a limit to everything, and unless this power, which is vested in the sound discretion of a trial court for the purpose of promoting the ends of justice, is so reposed, the court can see where prejudicial errors could happen to the plaintiff by the evidence of a defendant, if the latter could and had the power to compel limitless examinations in the hope of securing some medical expert who might agree with some theory, character of disease, or injury contended for by the defendant, and where this power, which is for the purpose solely of ascertaining the truth, could be so distorted as to prove an engine of destruction to the plaintiffs' rights in the hands of unscrupulous or dishonest defendants.

A judgment for $7,500 in the plaintiff's favor in this case is affirmed.

When Testimony of Physician and Patient Differs as to Pain

The Supreme Court of Washington says, in the personal injury case of Hoyt vs. Independent Asphalt Paving Co., that if a witness testifies that she experiences pain, and a physician testifies that there is no condition existing which would or could produce pain, and that, therefore, she can not be experiencing pain, the testimony would be conflicting, and the jury would be warranted in believing the witness who testified to experiencing the pain. But when she testifies that she experiences pain, and undertakes to give the cause of the pain, or the cause of certain painful conditions, and introduces expert scientific witnesses to corroborate her, and, instead of corroborating her, they flatly contradict her, and swear positively that the cause to which she attributes her injury and pain is an impossible cause, and testify as to what the actual cause is—it would seem that, if there is anything at all in medical science, the proof would be conclusive that the cause of the admitted condition was not the cause to which the condition was attributed by the suffering person.

Confined Constantly to the House

The Supreme Court of Nebraska holds, in the case of Breil vs. Claus Groth Plattsdutchen Vereen, that it cannot be said, within the meaning of an insurance contract for sick benefits, that an assured is not confined "constantly to the house" during an illness characterized by recurring periods of severity, although at intervals he may occasionally step into his yard, or make visits to his physician, or other short and unusual trips, the assured at all times being unable to resume the ordinary duties or pleasures of life.

No Fixed Measure of Damages for Pain

The Supreme Court of Nebraska holds, in the personal injury case of Bayard vs. City of Franklin, that there is no fixed rule for the measure of damages occasioned by pain. The amount is to be determined by the circumstances of each case, and is a matter peculiarly within the province of the jury.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal

June 26

1 *So-Called Cardiac Epilepsy. R. C. Newton, Montclair, N. J.
2 *Two Unusually Severe Cases of Myocarditis in Children, Caused by Profound Toxemia; Recovery. L. Fischer, New York.
3 Baldness. J. O. Cobb, Milwaukee.
4 Indications for Operation in Acute Mastoiditis. E. Dunziger, New York.
5 *Congenital Heart Disease. W. N. Bradley, Philadelphia.
6 *Severe Autointoxication with Acetonuria and Extreme Bradycardia. D. A. Singer, New York.
7 Pharmacology. C. A. Hofer, Philadelphia.
8 No Free Hydrochloric Acid in the Stomach. R. F. Faulkner, Pittsburg.

1. **Cardiac Epilepsy.**—Newton reports five cases illustrating cardiac neuroses or cardiac epilepsy. In one case there were distinct spasms of angina pectoris which were abundantly explained by the autopsy findings. As there was no postmortem examination of the brain, the opportunity was lost of ascertaining whether there was any change in the cerebral structures which might account for these seizures, and for the slight paralyses. In two cases the angina succeeded the epileptic

V 53
1909

attacks, and there can be little doubt that they may have been due to the same cause. In a fourth case it seems quite likely that angina may supervene later. The fifth case, perhaps, ought not to be called epileptoid at all. Only one of the cases cited was remarkable for its persistent slow pulse. Numbers of cases of slow pulse unaccompanied by any symptoms have been reported in people apparently in excellent health, so that when bradycardia is coincident with epilepsy, the conjunction may be purely accidental. In fact, a number of good authorities, probably a majority of observers, maintain the same proposition with regard to the coincidence of cardiac disease and epilepsy. Still, Newton believes that there are cases in which the condition of the heart is the cause of the epileptic attacks.

2. **Myocarditis in Children.**—Fisher says that the outcome of a case of myocarditis depends on persistence in the nutrition of the body, aided by carefully selected cardiac and vasomotor stimulants. Fresh air and sunshine are invaluable as aids in the proper establishment of metabolism.

5. **Congenital Heart Disease.**—In the case reported by Bradley the foramen ovale was patulous and there was almost complete stenosis of the pulmonary artery. The ductus arteriosus was patulous.

6. **Severe Autointoxication with Acetonuria and Bradycardia.**—Singer's case presents the following points of interest: 1. Acetonuria. 2. Bradycardia. The pulse registered from 4 to 8 to the minute and was synchronous with the heart beat. This shows the extreme grade of the intoxication of the inhibitory vital centers and of the myocardial degeneration. 3. Leucocytosis of 22,000. 4. Two separate and distinct toxemias; on the one hand, a clear history of chronic nicotine poisoning, and, on the other, superimposed, an acute infection justified by the history and symptoms, especially the acetonuria, indicanuria, anemia and convulsions.

Medical Record, New York

June 26

9 **Tuberculosis of the Lungs with Remarks on Microscopic Diagnosis.** L. M. Hurd, and J. Wright, New York.
10 *Use of Atropin Sulphate and Atropin Methylbromid in Diabetes Mellitus. J. Rudisch, New York.
11 **Compensatory Albuminuria.** H. Stern, New York.
12 **Treatment of Pott's Disease at the Sea Breeze Hospital.** L. W. Ely, New York.
13 *Combined Operation for the Radical Cure of Inguinal Hernia and Appendicitis. A. H. Harrigan, New York.
14 **Dermatobia Noxialis Infection.** J. D. Mangel, Atlanta, Ga.
15 **Practical Points in Treatment of Fracture of the Lower End of the Radius.** E. C. Beck, New York.
16 **Thiosinamin in Otology.** F. M. Fernandez, Havana.

10. **Atropin in Diabetes Mellitus.**—Rudisch had administered atropin in diabetes in the form of the methylbromid and the sulphate. As the initial dose of the methylbromid he has given gr. 2/15 t. i. d. to adults, gradually increasing this by gr. 1/15 until gr. 8/15 t. i. d. are being taken. In one case three grains were given daily over a short period with no other toxic effect than dryness of the throat. The initial dose of atropin sulphate should be gr. 1/150 t. i. d., that may be gradually increased to gr. 1/20 t. i. d. Children require a dosage proportionate to their age. It is noteworthy that these unusually large amounts of atropin are well tolerated, provided the initial dose is small and the increase gradual. It is not necessary to attain the maximum dose in the majority of cases, however, much smaller amounts often causing the glycosuria to disappear. With the appearance of the first toxic symptom, usually a marked dryness of the throat, the atropin was either stopped entirely, or, more often, the attempt to increase the dosage was temporarily abandoned. It was always possible to resume the drug after a period of rest. The action of atropin may be summed up under the following heads: (1) Reduction in the amount of sugar excreted; (2) increase in carbohydrate tolerance.

13. **Combined Operation for Inguinal Hernia and Appendicitis.**—Harrigan reports a case in which he employed the Torek operation with a slight immaterial modification.

Boston Medical and Surgical Journal

June 3

17 **Extensive Calcification of Pleuritic Exudation Causing Curvature of the Spine.** T. Dwight, Boston.
18 **Etiology and Diagnosis of Iritis.** P. H. Thompson, Boston.
19 **Chronic Glomerulo-Nephritis in which Double Decapsulation was Performed.** E. Garceau, Boston.
20 *Placenta Prævia. N. R. Mason, and J. T. Williams, Boston.
21 **Exercise in Pulmonary Tuberculosis.** B. S. Potts, Pittsburg.

June 17

22 *Conquest of the Tropics for the White Race. W. C. Gorgas, Ancon, Canal Zone.
23 *Diagnosis and Prognosis of Gallstone Disease from the Point of View of the Surgeon. M. H. Richardson, Boston.
24 **Placing out of High-Grade Imbecile Girls.** W. N. Bullard, Boston.
25 **Symptom-Complex of a Series of Exanthematous Diseases, or is there a New Contagious Exanthem?** J. W. Watson, South Braintree, Mass.

20. **Placenta Prævia.**—Mason and Williams have gone over the records of the Boston Lying-in Hospital for the past thirty-five years with the object of studying placenta prævia. The authors found that among 32,453 out-patients during a period of twenty-seven years, there was about one case of placenta prævia to every 700 pregnancies. The most important results of their investigation of the hospital records were those in regard to the treatment of the condition. After briefly outlining the histories of the fatal cases, the authors sum up their conclusions as follows:

1. Improvement in the results of the treatment of placenta prævia is to be expected not so much from any particular method of delivery as from early delivery.
2. The advantages of early delivery are as great for the child as for the mother.
3. Every patient should be instructed and enabled to notify a competent obstetrician at once of any uterine hemorrhage during pregnancy.
4. Any hemorrhage during the second half of pregnancy demands an immediate investigation of the contents of the lower uterine segment.
5. A routine vaginal examination should be made on every patient at the end of the seventh month.
6. In multiparæ, rapid dilatation, followed by version and extraction, offers a safe and satisfactory method for both mother and child.
7. In primiparæ, at the beginning of hemorrhage, while still in good condition. Cesarean section should be the operation of choice.

22. Published in THE JOURNAL, June 19, 1909, p. 1967.

23. **Gallstone Disease.**—This paper discusses very fully the diagnosis and the outlook of gallstone disease as contemplated by a surgeon after a thousand observations. Richardson says that the diagnosis of gallstones, though it presents many difficulties, is essentially easy and successful. The exact location of gallstones in the biliary tract is a matter of greater difficulty, but on that exact location almost wholly depends the prognosis. The diagnosis must be made positively before an operation should be undertaken—unless a diagnosis is impossible and failure to operate means increased suffering and ill-health, or death and disability, then an exploratory operation may be done.

Kentucky Medical Journal, Bowling Green

June 1

26 **Abortions.** W. R. Burr, Auburn, Ky.
27 Idem. C. M. Brown, Price's Mill, Ky.
28 **Mode of Entrance and Localization of Infection.** J. A. Stucky, Lexington.
29 **Am I My Brother's Keeper?** J. G. Carpenter, Stanford.
30 **Justification of Surgery in Connection with a General Practice.** C. P. Price, Harrodsburg.
31 **Postnasal Adenoids, Etiology, Symptomatology, Diagnosis and Treatment.** O. B. Demaree, Frankfort.
32 **Disease of Gall Bladder and Gall Ducts.** J. C. B. Foster, Monterey.
33 **Renal Calculi: Pyonephrosis; Report of a Case.** A. W. Davis, Mortons' Gap, Ky.
34 **Iron.** T. C. Nichols, Morgan.
35 **Ascites.** S. R. York, Centre.
36 **Factors which Influence the Prognosis of Chronic Valvular Disease of the Heart.** T. O. Meredith, Burgin.
37 **Diagnostic Value of Pain in Diseases of Abdominal and Thoracic Viscera.** D. H. Erkeletian, Hopkinsville.
38 **Acute Nephritis; Report of a Case.** D. G. Simmons, Adairville.
39 **Expectorants.** S. M. Hopkins, Demossville.
40 **Treatment of Gonorrhea and its Complications.** J. W. Rickers, Cincinnati.
41 **Acute Bronchopneumonia in Children.** J. C. McCreary, Cave City.
42 **Management of a Woman During Pregnancy and Labor.** J. N. Bailey, Fredonia.
43 **Fracture of Upper Third of Femur.** J. T. Green, Leitchfield.
44 **Arthritis Deformans.** P. A. Hart, Murray.
45 **Fracture in Children Under Ten Years of Age.** A. D. Willmoth, Louisville.

Northwestern Lancet, Minneapolis

June 1

46 **Diphtheria.** E. J. Clomens, Aberdeen, S. D.
47 **Conservatism in Traumatic Surgery.** W. Courtney, Brainerd, Minn.
48 **Postoperative Treatment.** G. R. Curran, Mankato, Minn.
49 **Acute Gangrenous Appendicitis.** C. J. Holman, Mankato, Minn.

American Journal of Medical Sciences, Philadelphia

June

50 *Short Duration Typhoid Fever. W. Coleman, New York.
51 Heart Failure in Infectious Diseases: Prevention and Successful Management. W. P. Worster, New York.
52 Symptoms of Descending Thoracic Aneurism. A. W. Hewlett, Ann Arbor, Mich, and W. R. P. Clark, San Francisco.
53 *Reversion Theory and Classification of Goiter. W. C. MacCarty, Rochester, Minn.
54 *Nature, Diagnosis and Treatment of Metabolic Osteoarthritis. P. W. Nathan, New York.
55 *Primary Splenomegaly of Gaucher Type. N. E. Brill, F. S. Mandlebaum, and E. Libman, New York.
56 *Primary Carcinoma of the Lungs. A. L. Garbat, New York.
57 Detection of β-Oxybutyric Acid in the Urine. T. S. Hart, New York.
58 *Effect of Certain So-Called Milk Modifiers on the Gastric Digestion of Infants. T. W. Clarke, New York.
59 Treatment of Boils. G. T. Jackson, New York.

50. Abstracted in THE JOURNAL, Feb. 13, 1909, p. 581.

53. **Classification of Goiter.**—MacCarty has been struck by the variance of the opinions and also the variance in the methods of attack in the study of the etiology. He has come to the conclusion that the process of goiter may be a process of reversion of the thyroid gland to some former function. Hyperthyroidism is a toxemia the result of absorption of the products of the hyperactive thyroid. The stimulus causing the hyperactivity may be the same that stimulated the thyroid to activity in primitive man. This stimulus was then probably a normal stimulus to the gland, just as we have normal stimuli for glandular activity in man in his present condition. This stimulus may still be present in the food or water, formed through some process in the intestine or in the metabolism of the body, or it may exist in the air. The types of goiter are probably not types at all, but stages in a general process. MacCarty suggests the following classification of goiter on a pathologic basis: (a) Cystic goiter (thyroidea cystica); (b) hypertrophic parenchymatous goiter (thyroidea parenchymatosa hypertrophica; (c) papillary cystic goiter (thyroidea cystica papillare); (d) hypertrophic fetal thyroid (thyroidea fœtalis hypertrophica; (e) fetal adenoma of the thyroid (thyroidea fœtalis adenomatosa). Hyperthyroidism always occurs in *b* and *c*, and may occur in *e*.

54. **Metabolic Osteoarthritis.**—Nathan believes that metabolic osteoarthritis is a distinct pathologic condition of the joints, which can easily be recognized clinically; it is not, however, a primary joint disease causing secondary general symptoms; nor is a uniform specific general disease responsible for it; it occurs in connection with a number of distinct clinical conditions, some of which are known to be specific diseases; the joint disease is not due directly to the conditions with which it is associated, but it is due to their deleterious influence on the general nutrition.

How the metabolism is affected or what changes it undergoes has not been determined. What is certain, however, is that the changes in the joint are passive; simply an atrophy which can only be induced by inadequacy of the nutrition. For these reasons, the joint disease here discussed has been grouped with the nutritive or trophic joint diseases. In order to distinguish it from those conditions which cause local changes only, it has been termed metabolic, and to distinguish it from the rather uncommon metabolic conditions which cause synovial changes only, it has been called osteoarthritis. Thus, metabolic osteoarthritis is a chronic osteoarthritis due to a vice of the metabolism caused by a number of conditions, organic or functional; insidious in onset; symmetrically involving new joints toward the trunk, it gradually leads to more or less deformation and crippling. The *x*-rays show circumscribed bone rarefication in the early stages, and a more or less complete absorption of the epiphyses in the later stages, but never proliferation or bony ankylosis. Pathologically, beginning in the bone, there is a pure atrophic degeneration of all the joint structures. Nathan has had uniformly good results with the use of the thymus gland extract in these cases. His method of proceeding is as follows: The thymus is given immediately, beginning with two 5-grain tablets, thrice daily. In two weeks the dose is increased to three tablets, and after a few months three tablets, four times a day, are given. The patient is kept at rest until all symptoms of active joint disease have subsided. Then begin passive motion in all the affected joints. This is carefully done at first and gradually increased until one has an arc of free motion which is only limited by the shortened tendons. Massage, which is often painful, is unnecessary, and may even be harmful. The next step is to get the patient on his feet. This is sometimes a tedious affair, for patients, particularly adults, are timid at trusting themselves at first, but by persistence, the patient eventually gains confidence, and finally is able to get around as well as the deformity in the lower extremity will permit. As soon as the patient is able to be on his feet or to use his joints without the appearance of joint irritation, all contracted tissues are divided with the tenotome and the deformity is corrected. This, of course, requires immobilization for three or four weeks, but with light plaster-of-Paris bandages it does not preclude the use of the lower extremities. A few days after the operation the patient is again induced to be about, and he is usually able to hobble around quite comfortably with crutches or a cane until the bandages are removed. With such treatment all but the most severe cases, which have existed for a long time, can be improved definitely. Often the patients recover sufficiently to be about and attend to their avocations. The treatment, however, requires patience, a definite knowledge of the condition, and time; without these only in the very mild cases can one be successful.

55. **Primary Splenomegaly.**—Brill, Mandlebaum and Libman claim that splenomegaly (Gaucher type) is a distinct disease, starting in early life, often affecting several members of a family, and running a chronic course. It may be recognized by a great enlargement of the spleen, which precedes a similar enlargement of the liver, and is unaccompanied by jaundice or ascites; by the discoloration of the skin, especially where exposed to light; and by the absence in the blood of any characteristic findings. The disease has none of the characteristics of malignancy, and usually terminates as the result of an intercurrent affection. The organs affected are the spleen, liver, lymph nodes and bone marrow. Histologically, these organs show the presence of large cells with small nuclei and a peculiar hyaline cytoplasm, whica arise from the endothelium or normal reticulum, and the presence of pigment containing iron. The etiology is unknown, though a peculiar susceptibility of the endothelium or reticulum of the hematopoietic apparatus to some unknown toxic agent is most likely present. There is nothing in the authors' two cases even suggesting tuberculosis. They say that when found in cases of this disease, it must be considered as a superimposed process.

56. **Primary Carcinoma of the Lungs.**—Garbat reports one case, a study of which has convinced him that while pulmonary alveoli and bronchial mucous membrane show no neoplastic tendency, there is conclusive evidence that this primary carcinoma of the lungs originates from the mucous glands of the smaller bronchi still containing cartilage. Several clinical features in his case deserve mention. The patient gave a history of distinct hereditary predisposition to tuberculosis. Several old tuberculous lesions were found in the left apex. This coexistence of tuberculosis and carcinoma of the lungs, although denied in general by Rokitansky, is not at all rare. Wolff described 31 cases of carcinoma of the lungs, of which 23 were complicated by tuberculosis. Schwalbe described 10 cases, of which 3 were complicated by active tuberculosis. Furthermore, Friedländer, Hildebrand, Seigert and Ribbert described cases of carcinoma developing in tuberculous portions of the lung.

The clinical diagnosis of tumor of the lung was made rather late in the disease. The probability of tuberculosis seemed so great that one was inclined at first to favor this diagnosis rather than that of carcinoma. The asymmetry of the chest, the diminished expansibility of the affected side, the bloody pleural fluid, and the persistence of dulness after evacuation of the fluid, speak for both tuberculosis and carcinoma. The fact, however, that the apices remained practically clear while the process was localized entirely at the right base, and in addition to this the absence of tubercle bacilli, should have suggested strongly the diagnosis of carcinoma. The sputum examination, too, proved interesting. The sputum was examined almost daily, and the only almost constant finding

V 5
1909

was blood. Naturally, it was profuse and mucopurulent. The variously described so-called characteristic "granule cells" ("*Kernzellen*") for carcinoma of the lungs were not found. As a rule, in a man over 50, profuse expectoration which almost constantly contains blood and no tubercle bacilli, associated with physical signs denoting some abnormal lung condition, should always make one very suspicious of neoplasm.

Two complications which arose—the abscess of the lung and the empyema of the gall bladder—masked the diagnosis in the lungs to a great extent; but the fact that even after those operations the patient did not get any relief, but became progressively worse, spoke highly in favor of an underlying malignant condition. When stenosis of the air passages became sufficient to produce symptoms, the diagnosis became more evident; but this, as usual, came late in the disease. Summing up the age of the patient (64 years) the bloody pleural fluid, the persistence of dulness after tapping, and the constant presence of blood in the sputum without tubercle bacilli, there was enough ground for making the diagnosis of carcinoma of the lung.

58. **Gastric Digestion of Infants.**—Clark believes that the motility of the infant stomach varies inversely to the concentration of the food. The more dilute the food the more frequently may the feedings be given. Lime water does not reduce the acidity of the gastric contents, the neutralizing of a portion of the acid being overcome by an increased stimulation of hydrochloric acid by the gastric glands. This may increase the amount of the acid available for digestion. Sodium citrate acts on the acid in the stomach, converting it into sodium chlorid and thus markedly reduces the "available hydrochloric acid." Barley water seems to have no constant effect on the chemistry of gastric digestion in the infant. The type of infants who vomit persistently may be divided into two classes, hypoacidity and hyperacidity. Test feedings should be given to this type of infants to determine to which class they belong. A 5 per cent. milk sugar solution seems to be the most satisfactory feeding to determine fine differences in the gastric contents. This may be followed by a mixture of milk of one part, water two parts, to determine to what extent the gastric glands are capable of responding to stimuli. For the lactose solution, thirty minutes is the most satisfactory time to allow the feeding to remain in the stomach; for the milk mixture, sixty minutes. On purely theoretical grounds, it would appear that when the acidity is low either small doses of alkalies or of hydrochloric acid are indicated, while in hyperacidity sodium citrate holds out the best hope of benefit. Protein digestion in the infant's stomach is slight and is proportional to the amount of hydrochloric acid in the organ.

Journal of Nervous and Mental Diseases, Lancaster, Pa.

June

60 *The Sensory System of the Facial Nerve and its Symptomatology. J. R. Hunt, New York.
61 Second Attack of General Postdiphtheritic Paralysis Occurring After an Interval of Two Years. F. E. Coulter, Omaha, Neb.

60. **Sensory System of Facial Nerve.**—Hunt gives a general survey of the clinical development of the facial nerve from a sensory point of view. That this nerve has a sensory system of importance finds corroboration on many sides. The results of investigation in the realms of embryology and anatomy find their counterpart in symptomatology and pathology. He believes, therefore, that the seventh nerve should take a definite place as a mixed nerve and should rank with the fifth in symptomatology and nomenclature. This anatomic division of the trigeminal system has proved to be a very practical one, and it has seemed to Hunt that a reconstruction of the facial system along similar lines would have a clinical value. Such a reconstruction would recognize on the proximal side of the ganglion a motor and a sensory root, and on the distal side of the ganglion three branches:

Peripheral Divisions of the Seventh Nerve.—(1) The great superficial petrosal with its tympanic branch and connections with Meckel's ganglion; (2) the small superficial petrosal nerve with its tympanic branch and connections with the optic ganglion; (3) the Fallopian facial, including the motor trunk, the chorda tympani and sensory fibers for the auricle.

Sensory Functions of the Seventh Nerve.—Special sense fibers to the anterior two-thirds of the tongue (chorda tympani). Sensory anastomosis with the terminations of the auditory nerve (internal ear). Sensory fibers to the middle ear, mastoid cells, eustachian tube (deep branches of the petrosal nerves). Sensory fibers to the anterior two-thirds of the tongue (chorda tympani). Sensory fibers to the external ear (emerging with the facial trunk at the stylomastoid foramen).

Sensory Symptoms and Syndromes of the Seventh Nerve.—Pain—Organic Origin: Fallopian neuritis (third branch); tabetic degenerations (sensory root); herpetic otalgia (geniculate ganglion). Functional Origin: Primary otalgia (tic douloureux of the ear); reflex otalgias. Anesthesias: Hypesthesia of the concha; hypesthesia of the anterior two-thirds of the tongue; ageusia of the anterior two-thirds of the tongue. Reflex: Reflex etiologic factor in the production of reflex facial twitchings and spasms. Syndromes: The herpetic inflammations of the geniculate ganglion; herpes oticus; herpes oticus with facial palsy and acoustic symptoms; herpes facialis and herpes occipito-collaris with seventh palsy and acoustic symptoms.

Southern Medical Journal, Nashville

May

62 Tuberculosis of the Breast. W. L. Rodman, Philadelphia.
63 Early Differential Diagnosis of Typhoid Fever. C. Thorington, Montgomery, Ala.
64 Prevention of Ophthalmia Neonatorum. H. H. Martin, Savannah, Ga.
65 Technic of Tonsillectomy. E. C. Ellett, Memphis.
66 Methods of Ascertaining Renal Function, and Its Importance to Surgery. L. W. Bremerman, Chicago.
67 Cystoscopic Findings in 65 Consecutive Cases. H. L. Kretschmer, Chicago.
68 Hematuria Occurring in Chronic Appendicitis. H. A. Royster, Raleigh, N. C.
69 Mucous Colitis. G. M. Niles, Atlanta, Ga.
70 Cesarean Section that must be Elective. J. D. Bloom, New Orleans.
71 Chronic Appendicitis. E. M. Williams.
72 Lord Lister is not a Scotchman. L. L. Hill, Montgomery, Ala.

Interstate Medical Journal, St. Louis

June

73 Development of Milk Laboratories in Connection with the Dispensing of Food Stuffs. T. M. Rotch, Boston.
74 *Bence-Jones Albumosuria Accompanying Myeloid Sarcoma of the Humerus Coincident with Trauma. G. W. Cale, St. Louis.
75 Diet as a Prophylactic and Therapeutic. H. W. Wiley, Washington, D. C.
76 Lichen Planus; Four Cases Occurring in Two Families. M. F. Engman, and W. H. Mook, St. Louis.
77 Tumor of the Cerebellum. M. A. Bliss, and N. B. Carson, St. Louis.

74. **Bence-Jones Albumosuria.**—Cale's case is peculiar in that the albuminous substance was found by a physician a year ago before the appearance of the bone disease, and in there being only one bone involved, the humerus. It is also remarkable that such complete destruction should have taken place in about two months. The patient was disposed to attribute the trouble to an injury, but Cale is inclined to believe that it was rather coincidental, or at the most a slightly contributing cause, inasmuch as the albumose was apparently present for a long time before the development of the myeloma. Had the nature of the growth been periosteal sarcoma, then there would have been better ground for regarding the injury as the cause of the growth. This is the second case which has been recognized and come to operation, the other case being reported by Ewald, who removed the right clavicle—it being the seat of a myeloma; the other cases were inoperable on account of the number of bones involved.

Military Surgeon, Washington, D. C.

June

78 *Prevention of Typhoid Fever by Vaccination and by Early Diagnosis and Isolation. P. F. Russell, U. S. Army.
79 Bacteriology of Plague. G. W. McCoy, U. S. P. H. and M.-H. Service.
80 The Flea in its Relation to Plague, with Synopsis of the Rat Fleas. C. Fox, U. S. P. H. and M.-H. Service.
81 Examination of Rats for Plague Infection. G. W. McCoy, U. S. P. H. and M.-H. Service.
82 Management of a Plague Campaign within the Provisional Plague District. J. R. Hurley, U. S. P. H. and M.-H. Service.

78. **Vaccination in Typhoid.**—Although Russell discusses this subject from the viewpoint of the Army surgeon, his views

are in accord with those of the civil practitioner. He says that typhoid fever can be stamped out by an aggressive campaign in which the sources of infection are traced by modern methods. This disease is practically contagious, and the patients should be isolated and routine disinfection should be carried out, not only until they are convalescent, but also until they have ceased to excrete bacilli. The correct diagnosis at the earliest possible moment of all cases is of prime importance to the sanitarian. Earlier diagnosis can be made by blood cultures than by the agglutination test or by clinical signs. The diagnosis of mild and ambulatory cases is of the greatest importance for the sanitarian. Vaccination against typhoid is the most promising way of keeping down the non-effective rate due to this disease.

Medical Herald, St. Joseph, Mo.

June

83 Tic and Chorea. H. T. Patrick, Chicago.
84 How the Physician, as a Physician, Can Best Serve the Community in which he Lives. E. H. Miller, Liberty, Mo.
85 Diphtheritic Paralysis. F. E. Coulter, Omaha, Neb.
86 Early Treatment of Cross Eyes. W. H. Graves, Pittsburg, Pa.
87 New Therapeutics. W. Waugh, Chicago.

Bulletin Johns Hopkins Hospital, Baltimore

June

88 Life and Times of Gerhardt Van Swieten. A. G. Gerster, New York.
89 The Moderator Band and Its Relation to the Papillary Muscles, with Observations on the Development and Structure of the Right Ventricle. R. Retzer, Baltimore.
90 *Effect of Scarlet Red, in Various Combinations, on the Epithelization of Granulating Surfaces. J. S. Davis, Baltimore.
91 Disposal of the Waste of the Brain Tissues. H. J. Berkeley, Baltimore.
92 Postanesthetic Acidosis. F. F. Gundrum, Baltimore.

90. **Effect of Scarlet Red on Epithelization of Granulating Surfaces.**—Davis' paper is based on observations made during the treatment of 60 cases with scarlet red. He used 2, 4, 5, 8, 10 and 20 per cent. scarlet red ointments, with a simple vaselin base. Sterilization of the ointment caused the color to become somewhat darker, but this change did not seem to affect the stimulating power of the preparation. Clean, healthy granulations should be bathed with boric solution and dried. If the granulations are unhealthy, peroxid of hydrogen is used before the boric-acid solution. Free use of silver nitrite stick is advisable to keep down exuberant granulations. The skin surrounding the defect should be anointed with some bland ointment up to within 1 cm. of the edge. Since this has been done the irritation complained of in some of the early cases has been, to a large extent, eliminated. The scarlet-red ointment may be applied over the whole surface of the wound if it be small, or simply to the growing epithelial edges. Whichever method is chosen, it is best to apply the ointment on perforated old linen, to which the granulations will not adhere, and which allows the escape of secretions and thus prevents maceration. When applied to the edges, the old linen should be used in narrow strips with a thin layer of the ointment. Another very satisfactory method is to apply a thin coating of the scarlet red ointment to the wound edges with a camel's hair brush, being sure that the edges are dry. Then either cover with strips of old linen, or expose to the air. This is especially useful in the partial skin-graft cases, and on small wounds, as the ointment can thus be placed accurately and the amount regulated. The portions of the wound not covered by scarlet red may be dressed as seems best, or may simply be exposed to the air under a cage. A light dressing of sterile gauze secured by a bandage completes the procedure.

This dressing should be removed within 48 hours, 24-hour intervals being preferable, and replaced by some bland ointment, such as zinc or boric ointment. After the same interval has elapsed, the scarlet red dressing should be replaced. There were 60 cases treated. Of these 44 were males and 16 females, the youngest being 2 years old, and the oldest 76 years. Duration of the lesions, a few days to 15 years. The cases were grouped as follows: Partial skin grafts, 7 cases; ulcer following operation for infection, 10 cases; ulcer following burn, 11 cases; traumatic ulcer, 10 cases; specific ulcer, 8 cases; varicose ulcer, 7 cases; ulcer following Cotting operation for ingrown toe nail, 3 cases; bedsore, 2 cases; miscellaneous ulcer, 2 cases.

The general health of the patient seems to have some bearing on the stimulating effect of the scarlet red, which is distinctly less marked in nephritic and diabetic cases. The age, on the other hand, has little or no effect. The rapid-growing epithelium is thick and at first a bluish-red in color with an opalescent spreading edge. Venules of consiuerable size can be seen close to the surface. The color and the enlarged vessels soon disappear, however, and the newly formed tissue rapidly assumes the color and characteristics of the normal skin. A section through an area thus healed shows practically normal skin. As a rule, after a short time this skin becomes freely movable over the underlying tissues. The exact strength and combination of the ointment to be used on different types of wounds can hardly be dogmatically stated, as experience is necessary for this knowledge. However, a few general observations may be of advantage. The 8 per cent. ointment is used unless especially contraindicated. In some cases which were sluggish to the 8, the 20 per cent. ointment has caused rapid stimulation of the edges. Davis does not advise the constant use of the 20 per cent. strength, as on several occasions it has proved too irritating in spite of all precautions. It is of value now and then, although its action should be carefully watched. On several wounds which were nearly closed, the pure scarlet red powder was dusted on the uncovered area, after protecting the surrounding skin. It had a marked drying effect and caused no irritation. When the wounds are covered with unhealthy granulations, and the discharge is profuse and foul smelling, the scarlet red in iodoform ointment, or balsam of Peru, or blue ointment is very efficacious in cleaning up the granulations, and at the same time stimulating the epithelial growth.

Kansas City Medical Index-Lancet

June

93 The Doctor in Court. W. F. Langdon, Cincinnati.
94 Thoughts Connected with the State of Sleep. C. B. Hardin, Kansas City.
95 Rheumatism of the Throat and Eye. W. H. Graves, Pittsburg, Kan.
96 Treatment of Membranous Croup. C. S. Merriman, Kansas City.
97 Paralysis of the External Rectus Muscle, Due to Disease of the Sphenoid Sinus. J. W. Bell, Kansas City.
98 Varicocele. B. A. Poorman, Kansas City.
99 Unusual Injuries to the Eyes. J. W. Kimberlin, Kansas City.

West Virginia Medical Journal, Wheeling

June

100 Cardiac Asthma, Cheyne-Stokes Respiration, Bradycardia, Adams-Stokes Syndrome. L. D. Wilson, Wheeling.
101 Sarcoma of the Uterus in a Girl 12 Years Old. J. T. Thornton, Wheeling.
102 Power of the Mind over the Body. H. H. Phelps, Wellsburg.
103 National Formulary vs. Proprietaries. C. W. Halterman, Clarksburg.
104 Relationship of the Practice of Medicine to the Practice of Pharmacy. C. D. Sturm, Clarksburg.
105 Origins of Tics and Hysterical Symptoms. T. A. Williams, Washington, D. C.
106 *Large Foreign Body in Eye. J. L. Dickey, Wheeling.

106. **Foreign Body in the Eye.**—Dickey reports the case of an engineer who was struck in the left eye by a piece of glass from a lubricator tube. The cut extended from the center of the cornea to the margin and as far beyond it through the sclera. The glass was not discernible, and it was supposed to have bounced off after cutting the eye. But pain and inflammation did not subside under proper treatment, and the sight gradually disappeared until the patient had not even light perception. Skiagraphs showed a large piece of glass imbedded in the eyeball and protruding near the optic nerve. The eye was enucleated, and the piece of glass, was found to be of the dimensions shown by the skiagraphs, namely: three-fourths of an inch long, three-eighths of an inch wide, and about one-eighth of an inch thick, concavo-convex in shape. No sympathetic symptoms occurred.

Progressive Medicine, Philadelphia

June

107 Hernia. W. B. Coley, New York.
108 Surgery of the Abdomen. E. M. Foote, New York.
109 Gynecology. J. G. Clark, Philadelphia.
110 Diseases of the Blood, Diathetic and Metabolic Diseases of the Spleen, Thyroid Gland, and Lymphatic System. A. Stengel, Philadelphia.
111 Ophthalmology. E. Jackson, Denver.

V 53
1909

Illinois Medical Journal, Springfield

June

112 *Relation of the Medical Profession to the Secular Press. J. W. Pettit, Ottawa, Ill.
113 Hygiene of the School Child. J. W. Van DerSlice, Chicago.
114 School Playgrounds. H. B. Favill, Chicago.
115 Tuberculosis, Its Treatment with Tuberculinum Koch and an Index to Dosage. L. Snoddy, Chicago.
116 *Indications and Limitations for the Use of Antigonococcus Serum. R. H. Herbst, Chicago.
117 The Principles of Revision of the Pharmacopeia of the United States of America. F. Billings, Chicago.
118 A Comparison of the United States Pharmacopeia with some Foreign Pharmacopeias. W. A. Puckner, Chicago.
119 *How Can We make the Pharmacopeia more Popular with Physicians? B. Fantus, Chicago.
120 Diagnosis and Treatment of Chronic Catarrh of the Bowels in the Light of Recent Clinical and Physiological Research. J. L. Jacque, Chicago.
121 *A Modern Method of Treatment of Typhoid Fever. J. P. Roark, Bushnell, Ill.
122 Some Lessons in Tonsil Surgery. C. B. Younger, Chicago.

112. Abstracted in THE JOURNAL, June 12, 1909, p. 1951.

116. **Use of Antigonococcus Serum.**—In the last year Herbst has used the serum only in 24 joint cases, with excellent results in almost every instance. In 4 cases the patients did not show any improvement. In 2 of these, however, he was able to demonstrate the gonococcus in fluid aspirated from the affected joints. In the other 2 aspiration was refused, but he is convinced from the clinical picture in both of them that they were infections of the joints and not toxemias. Of the 20 cases in which results were good, 6 were of a very acute type, the joints being greatly swollen and extremely painful and tender. When cases in which the serum has been used with good results occur after a few weeks or months, it is because the source of the toxic material has not been eliminated before the use of the serum. The local infection should be cleaned up at the time or, better, before the serum is used. Another reason for the recurrence seen in these cases is the insufficient quantity of serum given. Unless the patient receives at least from 18 to 24 c.c. and, better, 30 c.c., he is likely to have a recurrence. Partial relief after the use of the serum in most cases is due to an insufficient dose. If a correct diagnosis is made; if the condition of the joint or joints is due to a toxemia and not an infection with the germ; if the original focus of infection is cleared up before or at the same time the serum is administered; if the serum is given in sufficient quantity, then antigonococcus serum will give the results expected of it. The serum has absolutely no effect on acute gonorrheal infections, whether they exist in the lower urinary tract or in any other part of the body. Its value in toxemic gonorrheal joints is without question. In the past these painful joints accompanying and following gonorrhea have been most resistant to treatment, both local and general, but in the serum we now have a remedy which will give rapid and permanent relief to the sufferers from this common complaint.

119. **How Can We Make the Pharmacopeia More Popular with Physicians?**—The pharmacopeia is not so popular with physicians as it ought to be; and that is one of the roots of the nostrum evil. Is there much in it to make it attractive to physicians? Is it not a pharmacist's rather than a physician's book? The Pharmacopeia contains but few of the facts that a physician must know in order to be able to prescribe, and many that the physician is not in need of. Would it not be well to have a book that would give in an authoritative, systematic, concise and yet complete manner all the facts that a physician might need in order to compose a prescription for and pharmacopeial remedy that he has not prescribed before? Such a book, according to Fantus, should contain: 1 The names of the drug—Latin name, English name, synonym. 2 The physical characteristics of the drug. 3 The chemical characteristics of the drug, including composition in case of compound drugs, for the purpose of teaching chiefly how to avoid incompatibilities. 4 Dosage—the average dose or doses, and the average frequency of repetition to obtain or maintain effect. The minimum fatal dose should be given wherever possible. Dosage for children might advantageously be added in connection with important drugs. For external remedies strength of application should be noted. 5. Administration—best methods known for prescribing the remedy in a pleasant and efficient manner. 6. Antidotes, antagonists and the treatment of poisoning. 7. The preparations of the drug, each of which should be treated from the above named first five standpoints. If more than one preparation is official, the relative merits and special uses of each should be pointed out. This, Fantus thinks, would be the physician's pharmacopeia, which every physician would have occasion to make frequent use of. To give such a book the greatest degree of reliability, completeness, and therefore usefulness, a body of experts such as constitutes the Committee of Revision of the Pharmacopeia would be required as its authors, and it should be published simultaneously with the pharmacist's pharmacopeia.

121. The practical points in this paper are the same as in a similar paper by this author in THE JOURNAL, April 3, 1909, p. 1089.

The American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

June

123 *Cesarean Section in Placenta Praevia. C. Jewett, Brooklyn, N. Y.
124 *The Indications for Abdominal Cesarean Section in Placenta Praevia. H. D. Fry, Washington, D. C.
125 *Sterilization in Cesarean Section. J. O. Polak, Brooklyn, N. Y.
126 *The Justifiability of Sterilizing a Woman after Cesarean Section, With a View to Preventing Subsequent Pregnancies. C. M. Green, Boston.
127 *Further Reasons for Examining and if Necessary Removing the Vermiform Appendix in Every Case of Abdominal Section. A. L. Smith, Montreal.
128 *The Nurse as Anesthetist. J. M. Baldy, Philadelphia.
129 *Renal Excretion During the Administration of Chloroform and Ether in Gynecologic Surgical Operations. J. W. Bovée, Washington, D. C.
130 *Conservatism in Surgery of the Pelvic Organs. H. J. Boldt, New York.
131 Acute Postoperative Dilatation of the Stomach. E. H. Grandin, New York.
132 Streptococcus Infection and Medullary Carcinoma of the Breast in Pregnancy. E. P. Davis, Philadelphia.
133 Acute Anterior Poliomyelitis. J. D. Morgan, Washington, D. C.
134 Anterior Poliomyelitis. H. W. Frauenthal, New York.

123 to 126. Abstracted in THE JOURNAL, May 8, 1909, pp. 1527, 1528, 1529.

127, 128, 129. Abstracted in THE JOURNAL, May 15, 1909, pp. 1612, 1614.

130. **Conservatism in Surgery of Pelvic Organs.**—Boldt says that exsection of a part of an ovary, the seat of small cystic degeneration, or the puncturing of the small cysts does not deserve the name of conservative surgery, because the small cystic degeneration is without significance. Plastic surgery on suppurating Fallopian tubes is considered as bad surgical judgment, rather than as conservative surgery, because the patient on whom such a procedure is undertaken is not cured by it. The removal of a pedunculated subperitoneal myoma should not be considered conservatism; it is only a common sense procedure. Good judgment must be used in interstitial multiple myomata, and in subperitoneal myomata if the latter have attained to more than 4 or 5 centimeters in diameter. To retain the uterus in such cases is conservative surgery. It is also conservative surgery to retain the whole or a part of the uterus in cases of an abscess in the uterus. In cases of ovarian tumors, an attempt should always be made to regain functionating ovarian stroma from the base of the tumor. In all cases of doubtful character of the tumor a frozen section of it should be made, if possible, by the pathologist of the hospital, and his report on the character of the tumor be obtained before the abdomen is closed. Boldt has done the operation 45 times in cases of bilateral tumors during the past 20 years, and, with one exception, there has been no occasion to regret the procedure. The menstrual function had been retained in all patients; some had conceived and were delivered at term.

Dominion Medical Monthly, Toronto

June

135 Anterior Poliomyelitis. H. T. Machell, Toronto.
136 Paraplegia. J. T. Fotheringham, Toronto.
137 Hyperpyrexia. D. J. G. Wishart, Toronto.
138 Tuberculosis in the General Hospital and its Relation to the Milk Problem. J. N. E. Brown, Toronto.
139 The More Important Germs Found in Aural Discharge, with some Clinical and Pathologic Manifestations. G. Royce, Toronto.

Journal of Advanced Therapeutics, New York

June

140 Employment of the Caldwell Cavity Tube as a Surface Electrode. C. R. Dickson, Toronto.

141 Treatment of Arteriosclerosis and Hypertension. W. B. Snow, New York.
142 Electrochemical Minor Surgery. E. S. Smith, Bridgeport, Conn.
143 High-Frequency, High-Potential Currents in Diseases of the Nose and Throat. I. C. Soule, Kansas City, Mo.

Laryngoscope, St. Louis

June

144 Observations on Esophageal Cases and the Presentation of Two New Instruments. H. P. Mosher, Boston.
145 Chronic Stenosis of the Larynx Cured by Dilatation. D. B. Delavan, New York.
146 *Sheet of Directions Given to the Patient After a Tonsil Operation. E. Pynchon, Chicago.
147 Early Immunization, the Essential Function of the Tonsil. R. H. Good, Chicago.

146. This article also appeared in the *Virginia Medical Semi-Monthly*, May 21.

St. Paul Medical Journal

June

148 The Genesis of the Transmissible Diseases. J. M. Armstrong, St. Paul.
149 *The Parathyroids. J. S. Gilfillan, St. Paul.

149. **The Parathyroid Glands.**—Gilfillan reviews the literature on the physiology of the parathyroids and points out that the postoperative tetany is almost certainly, other forms of tetany probably, due to parathyroid insufficiency. That certain diseases manifesting disturbed calcium metabolism, notably rachitis and osteomalacia, may possibly have a similar origin, while as yet the evidence is insufficient as to the many other constitutions mentioned in this connection. The value of parathyroid therapy, he says, is still doubtful.

Albany Medical Annals

June

150 *One Hundred Cases of Herniotomy in Children with End-Results. H. C. Deaver, Philadelphia.
151 The Emmanuel Movement. A. S. M. Chisholm, Bennington, Vt.
152 Some Relations of Normal Suggestion. H. Elliott, Troy, N. Y.

150. **Herniotomy in Children.**—Deaver sent a circular letter to the parents of 100 children. There was no operative mortality in this series. Replies received from 63 showed no instance of recurrence. These operations were performed from 1 to 16 years ago. All these children were below the age of 14 years. The youngest patient was a baby 28 days old, who was operated on for strangulated hernia. In this series there were 2 instances in which brothers of nearly equal ages were operated on in succession. In this series there were 3 scrotal hernias of large size in children under 5 months of age. Based on the above cases, Deaver concludes that if the hernia be small and the truss easily kept in place, it is feasible to persevere in the use of this apparatus. If there is no cure after a year's trial, operation should be performed. The truss should only be advised when the mother is intelligent enough to carry out the instructions as to its proper use. It is not advisable to order trusses among the poor where the care of the children and their environments are not so favorable as among the intelligent classes. Too often in such cases the wearing of the truss offers a false sense of security against accidents, such as strangulation, and the hope that the truss will cure these hernias often proves futile. The expense of the truss must also be considered. Since the operation has practically no mortality, and since the results are so good, radical operation is justifiable, and this wholly irrespective of age. In large scrotal hernias he would not advise in any class of patients the use of the truss because the operation is not serious and the results are perfect and permanent. As to the operation itself, the most important point in the closure of the canal is the separation of the layers so as to get firm union between them in their new relations and, at the same time, to prevent any tension on the deep sutures. The skin incision should not be prolonged too far outward toward the scrotum; not more than half an inch below the external abdominal ring. The sac should be completely removed, and, if cut properly, its stump disappears from sight by the elasticity of the peritoneum. The only true indication that the limit of the sac has been reached is the end of the thickening of the tissue forming the sac.

Mississippi Medical Monthly, Vicksburg

June

153 *Indigestion from a Surgical Standpoint. J. Darrington, Yazoo City.
154 The Neglected Gynecologics. L. C. Feemster, Nettleton.
155 Enterocolitis in Children. G. S. Bryan, Amory.

153. Abstracted in THE JOURNAL, May 15, 1909, p. 1606.

New Orleans Medical and Surgical Journal

June

156 A Year's Progress in Tropical Medicine. J. M. Anders, Philadelphia.
157 *Relation of House-Flies to the Spread of Disease. H. Skinner, Philadelphia.
158 Positive Differentiation of Hysteria and Psychasthenia—Essential Characters. T. A. Williams, Washington, D. C.
159 Thymokesis. A. E. Fossier, New Orleans.
160 Hemoglobinuria, or Blackwater Fever; Its History, Geographic Distribution, and Etiology. M. Brady, New Orleans.
161 The Doctors and Their Ethics. E. D. Martin, New Orleans.
162 Classics and Modern Training. W. Miller, New Orleans.

157. Abstracted in THE JOURNAL, May 8, 1909, p. 1536.

Iowa Medical Journal, Des Moines

June

163 How to Interest the Young Man in the County Society. J. V. Littig, Davenport.
164 The Lazy Secretary and His Baneful Influence on the County Society. N. M. Whitehill, Boone, Ia.
165 *New Method for Closing Canalis Femoralis in Large Femoral Hernia. H. J. H. Hoeve, Des Moines.
166 Protest and Prophesy. C. A. Henry, Farson, Ia.
167 Peculiar Nervous Phenomena Exhibited During Pregnancy and Labor. T. J. Walker, Dubuque.
168 Infections Complicating Labor from a Clinical Viewpoint. H. G. Welpton, Des Moines.
169 Unusual Infection of the Face. E. E. Dorr, Des Moines.
170 Case of Anencephalus. J. A. Goodrich, Des Moines.

165. **Femoral Hernia.**—All operations for the radical cure of femoral hernia have the same object in view, namely, reduction of the contents of the sac, doing away with or obliterating the sac and prevention of recurrence by closing the annulus et canalis femoralis. The only method which meets all the requirements anatomically as well as surgically, would be a total obliteration of the annulus femoralis and the canalis femoralis, a closing up of this entire space in such a way that there is no traction on the stitches and that it is stronger than it was under normal conditions. To meet these requirements, Hoeve offers the following method. He has never seen a recurrence when this method was followed properly:

1. Make a curved incision from the middle of the ligamentum inguinale (Pouparti) inward and downward, until well below the lower level of the hernial sac.
2. Free the entire sac as far up as possible and after opening it, deal with its contents as necessary. Omentum can be cut away, bowel may be replaced if in good condition, etc.
3. Close the neck of the sac as high up as possible with a purse-string suture and remove it.
4. Introduce two stitches from without inward, including the cornusuperious marginis falciformus, the internal fibrous septum, the neck of the sac and the antero-superior part of the ligamentum lacunare (Gimbernati), but see to it that there is no tension.
5. Dissect up a flap of fascia pectinea, (pubic portion of the fascia lata), and loosen it carefully forward and upward until the pecten ossis pubis is reached.
6. Ligate the arteria pudenda externa near the external cut margin of the flap.
7. Strengthen the rolled margin or base of the flap by introducing two or three stitches through it into the muscle pectineus (mostly not necessary).
8. Introduce two deep stitches through the middle of the flap and the puckered up neck of the sac and pull them tight.
9. Sew the external margin of the flap carefully against the anterior surface of the margo falciformis, introducing the stitches from without inward through it, the vagina vasorum and the areolar tissue without injuring the lacuna femoralis.
10. Continue with the same chromacized catgut and sew the internal border of the flap against the inferior part of the ligamentum inguinale (Pouparti).
11. Sew the loose margin of the fascia pectinea, just internal to the fossa ovalis to the muscle pectineus.
12. Close the wound by bringing together the tela subcutanea and the integument.

Bulletin of the American Academy of Medicine, Easton, Pa.

June

171 *Statement of the Entrance Requirements and the Didactic and Laboratory Portions of the Medical Course at Colleges Requiring Preparatory Studies Beyond the High School Course Equivalent to One or More Years at College. N. P. Colwell, Chicago.
172 *Can the Third and Fourth Years of the Literary College Give Any of the Subjects of the Medical Course? W. M. Miller, Columbia, Mo.
173 *Can the Colleges Give as Electives in the Junior and Senior Years Any of the Work Required in the First Two Years of the Course in Medicine? J. L. Heffron, Syracuse, N. Y.
174 What Are the Underlying Principles Permitting the Entrance of a Student to Advanced Standing in a Medical College; And What Methods Should be Used to Make These Principles Effective? C. McIntire, Easton, Pa.
175 Preliminary and Graduation Requirements for the Medical Course in Terms of Work Done. E. Jackson, Denver, Colo.

V 53
1909

171, 172, 173. Abstracted in THE JOURNAL, April 3, 1909, p. 1132, 1133.

174, 175. Abstracted in THE JOURNAL, April 10, 1909, p. 1201, 1202.

The Old Dominion Journal of Medicine and Surgery, Richmond

June

176 *The Treatment of Locomotor Ataxia by Exercises of Precision. J. K. Mitchell, Philadelphia.
177 *Diverticulum of the Intestine. G. B. Johnston, Richmond, Va.
178 *The Treatment of Fracture of the Patella, Especially Old Fractures. F. W. Parham, New Orleans, La.
179 Requisites for the Treatment of the Psychoneuroses; Psychopathologic Ignorance, and the Misuse of Psychotherapy by the Novice. T. A. Williams, Washington, D. C.
180 Fractures of the Head and Neck of the Radius. G. P. Laroque, Richmond, Va.
181 The Motais Operation for Ptosis. H. D. Bruns, New Orleans.
182 The Modern Teacher of Internal Medicine. G. C. Robinson, Philadelphia.

176. **The Treatment of Locomotor Ataxia by Exercises of Precision.**—When the ataxic has been unwisely advised, activity, and is suffering from fatigue, increased lack of control, and severe pains, Mitchell orders rest in bed for two or three weeks, with massage. Under this treatment the pains are said to grow less or wholly to disappear—partly from the absence of exertion, partly because the patients are not exposed to sudden temperature changes, partly through the influence of the massage. Massage must be deep, hard and slow, to be effectual. After this rest, Mitchell begins training in control—variously described as coordination exercises and reeducational gymnastics, but which he prefers to call precision exercises. The general principles which should govern the instruction are to proceed on natural lines in the way one would use in teaching any unaccustomed movement, remembering above all that the point and essence of the whole plan is precision. The exercises, from the simplest to the most complicated, must be performed accurately, with the idea always before both teacher and pupils that to do the prescribed movement correctly and exactly is the task—not just to do it. If the patient walks, he walks not to reach a certain spot but to walk in a certain fashion. Individual teaching is absolutely required in the beginning. After the first lessons and when the patient is once able to do a little work on his feet, he may join a class and find not only that the stimulus of competition is a help, but that his observation of the errors of others assists him to correct his own. The vision may be used as a guide, in bad cases. When improvement has begun, some of the exercises may be performed with closed eyes. A very few minutes twice a day will be found sufficient at first. In very early cases this method has seemed to exert a sort of prophylactic influence in holding the diseases in check. This statement is made by Mitchell with full knowledge of the fact that ataxia is a disorder which advances a stride and then pauses—and that the pauses which belong to the natural history of the disease may be mistaken for improvements or considered to be consequent on treatment. The result has occurred too often and lasted too long for this conclusion. A case is at present under observation which has not advanced in fifteen years; another whose improvement has remained unimpaired nine years and others have dropped out of sight after six or seven years had brought no change for the worse.

177. **Diverticulum of the Intestine.**—Johnston's case was one of those in which the distal end of the diverticulum is free, and some accident, such as acute diverticulitis (comparable in all respects to an acute inflammation of the appendix), causes the fixation of the end of the diverticulum to the wall of the abdomen, the omentum or the intestine, thus forming a loop, and in this loop a coil of intestine or omentum becomes strangulated.

178. **Fracture of the Patella.**—Operative treatment being considered the desirable one for the case under consideration, Parham recommends approximation by suture of the soft tissues only in recent fractures. In old fractures this plan is out of the question and other measures usually advised must be employed. Parham reports one case of fracture of both bones—one recent, the other of five years' standing. The former was treated as stated above, the latter was wired. The result was excellent, complete approximation with restoration of function being secured in both patellæ.

Louisville Monthly Journal of Medicine and Surgery

June

183 Increasing Prevalence of Animal Tuberculosis. A. D. Melvin, Washington, D. C.
184 Obstetrics on the Thibetan Border. A. L. Shelton, Bating, W. China.
185 Mucous Colitis. C. Thompson, Louisville.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

June 12

1 *Modern Treatment of Fractures. J. Lucas-Championnière.
2 Prodromas of Migraine. Sir W. R. Gowers.
3 Diagnosis of Syphilitic Diseases of the Nervous System. F. W. Mott.
4 *Chronic Intestinal Stasis. W. A. Lane.
5 Hypertrophic Osteoarthropathy of Hands without Visceral or Constitutional Disease. R. C. Worsley.
6 Biotripsis, or Life-Wear: Trophic Changes in Old Age. G. L. Cheatle.
7 Aspects of the Legal Responsibility of Medical Men. A. O. Cowburn.
8 A Thirty Days Fast. F. Penny.
9 True Elephantiasis. H. S. Reynolds.
10 Nævus Pigmentosus. E. N. M. Ross.

1. **The Modern Treatment of Fractures.**—Lucas-Championnière gives a summary of the history of the treatment of fractures down to the present day, and then proceeds to the discussion of the method employed by him with good results. He says that a certain amount of movement between the fragments ensures the best bony repair; this is the cornerstone on which his method is based. Every movement which is not injurious by reason of its amplitude favors repair; but the movement must be measured—dosed, so to say. The movement which is necessary for the repair of the bones is not less necessary to the vitality of all constituent parts of the limb, and particularly for all the organs of motion—joints, muscles, ligaments and tendons. Massage forms the best form of movement. By simple mobilization, by massage, and even by his own examination, the surgeon ought never to cause pain, for the pain so caused leads to fresh pain and produces complications.

The reduction of a fracture is only a relative necessity; it should be resorted to only in certain deformations of the axis of the bone which are incompatible with the function of the limb—lower third of the leg, shaft of the humerus. In a large number of cases the maneuver of reduction is useless; it is useless in all fractures of the radius with impaction and moderate deformity, in most fractures of the upper extremity of the humerus, and in the great majority of fractures of the neck of the femur. In all fractures in which the displacement is due to muscular contraction, any attempt at reduction is useless, as in fracture of the clavicle, of the olecranon, and many fractures of the malleoli. After massage the fracture is either spontaneously reduced, as in the case of the olecranon, or is very easy to maintain reduced, as in the case of the clavicle and malleolus. Those conditions which favor the vitality of the limb are all more important than those which produce immobilization of the fragments. The fact that shortening has not the injurious influence on repair which it is said to have should not be lost sight of when considering displacement. A moderate degree of shortening which does not change the static position of a limb is favorable to repair. The muscles surrounding a shortened lever act more rapidly and better than on a lever on which they are stretched. A certain amount of shortening ought not to be interfered with, as it is favorable to the repair of a broken bone. Massage has so great an effect in stimulating bony secretion at the site of fracture that in children, in whom the activity of the production of the bone is great, massage ought not to be applied, save with great moderation, for fear of provoking excessive osseous secretion—in fact, a tumor. In their case simple mobilization is often sufficient.

Mobilization from the beginning, within twenty-four or forty-eight hours, is of capital importance, and at this stage movements of very small amplitude are sufficient; passive or induced movements are the best at the beginning. Active or spontaneous movements ought to be measured and directed by the surgeon; to allow the patient to follow his own fancy

with regard to active movements is dangerous—all the more dangerous because with Lucas-Championnière's method the pain caused by movement disappears from the beginning, and therefore does not limit the untimely action of voluntary movement. The pain experienced and the degree of sensitiveness of the callus are the best guides in directing and in permitting movement by the patient. The secondary treatment of fractures and their supervision ought not to be prolonged. Functional use of a fractured limb is the condition most favorable to its regaining active power. Even during this secondary period everything likely to irritate the region of the callus ought to be avoided. It is useless to cause pain by movements exaggerated in amplitude or by resort to forcible manipulation.

4. **Chronic Intestinal Stasis.**—Lane refers to a previously described operation for the relief of intestinal stasis in which a stage has been reached in which owing to the delay in evacuating its contents the large bowel has not only ceased to perform a useful function, but has become such a source of danger that its removal from the drainage scheme will be of great service to the body. It depends on the degree of development of the condition as to whether it is sufficient to separate and destroy constricting bands, or to divide the ileum and to connect it with the sigmoid or rectum, or whether it is necessary to remove the large bowel proximal to the junction. While in an early stage, and especially in the male subject, the obstruction at the hepatic or splenic flexures or at the sigmoid may be relieved by the division of bands producing constriction, in a late stage, when the small intestine has undergone extreme changes, the removal of the whole of the large bowel proximal to a junction between the small intestine and the sigmoid affords only a temporary alleviation of symptoms. The most favorable cases for operation are those in which the symptoms are of a toxic rather than of a painful nature. In such the division of the ileum and its junction with the lower part of the large bowel give complete relief to the symptoms and the consequent physical and mental improvement is extraordinary. When painful symptoms are much in evidence the large bowel should be removed. The risk entailed by operation can be reduced very materially by first relieving the toxic symptoms by connecting the divided ileum with the sigmoid or rectum, and later, when the general condition of the patient has improved in consequence of this procedure, the large bowel can be excised if the symptoms demand it.

Lancet, London

June 12

11 *Modern Treatment of Fractures. J. Lucas-Championnière.
12 Diagnosis of Syphilitic Diseases of the Nervous System. F. W. Mott.
13 Operative Treatment of Fractures. W. A. Lane.
14 *Vaccine Therapy of Enteric Fever. D. Semple.
15 *Facial Palsy Treated by Faciohypoglossal Anastomosis. C. A. Ballance.
16 *Surgical Treatment of Colitis. G. Heaton.
17 Fatal Hemorrhage into the Pons Varolii in a Young Infant. S. Phillips.
18 Internal Hernia; Extensive Resection of Gangrenous Ileum; Recovery. W. S. Handley.
19 *Bacillary Infection of Urinary Tract Treated by Corresponding Serum and Vaccine. H. O. Butler.
20 Instructive Fatal Case of Appendicitis with Advocacy of Early Operation. J. S. Boden and E. M. Corner.
21 Rupture of the Heart. W. H. Davis.
22 Hydatid Cyst of Uterus: Hysterectomy; Death after 48 Hours. S. Clark.

11. See Abstract No. 1.

14. **Vaccine Therapy of Enteric Fever.**—Semple claims that the administration of bacterial vaccines in cases of enteric fever is a practical method of increasing the bacteriotropic substances in the blood, as evidenced by an increase in the opsonic index of cases treated by this method. When appropriate doses are given the method is devoid of all risks, is easily carried out, produces no apparent disturbance in the patient's condition, and does not interfere with any other treatment the physician may deem necessary. In six of the nine patients treated well-marked improvement set in after the inoculations, especially in two cases treated with autogenous vaccines. In the remaining three there was an amelioration of the clinical symptoms.

15. **Facial Palsy Treated by Faciohypoglossal Anastomosis.**—Ballance reports the case of a young woman of 25 who had complete left facial palsy and unhealed disease of the temporal bone. She gave a family history of phthisis and had herself suffered from hemoptysis. Six attempts to cure the bone disease by operation were made, but proved ineffectual. In January, 1906, foul pus was discharging from the left ear. There was complete facial palsy on the left side; the patient suffered from pain in the left ear and from frontal and occipital headache. She was slightly ataxic on the left side. In walking she occasionally tended to deviate, but the direction of deviation was not constant. There was no aërial conduction of hearing on the left side, but bone conduction was still present. There was no optic neuritis, but the left external rectus was weak. The reflexes were normal. The right ear was normal. On Jan. 24, 1906, a radical mastoid operation was performed. Ballance found that the facial nerve had been divided in the descending portion of the Fallopian canal, the horizontal semicircular canal had been opened, and there were two other openings into the semicircular canals as if an attempt had been made to remove them. The antrum had been incompletely exposed and was full of greenish pus. The tegmen tympani was carious and was removed; the dura over it was thickened, but not perforated. On July 4, 1906, there was slight constant left internal strabismus, in addition to complete left facial palsy of peripheral type. On July 10 a nerve-grafting operation was done. An incision was made along the anterior border of the sternomastoid; the posterior belly of the digastric was exposed and divided; the facial nerve was found at the lower part of the parotid and was identified by direct electrical stimulation; the retrahens aurem was the only muscle which responded to the stimulus. The trunk of the facial nerve was followed up to the stylomastoid foramen and divided at its point of emergence. The hypoglossal nerve was divided at the posterior border of the hypoglossus, and the occipital artery was divided between two ligatures so as to set free the nerve. The central end of the hypoglossal nerve was then anastomosed with the peripheral end of the facial. The spinal accessory nerve was next isolated and split longitudinally for about two inches; one-half of the nerve was divided transversely at the distal peripheral end of the slit. The strip of spinal accessory so raised up was united end to end with the peripheral end of the divided hypoglossal. The posterior belly of the digastric was sutured and the wound closed. Six weeks after the operation the left trapezius and sternomastoid muscles and the left side of the tongue were atrophied. When the patient returned 20 months after the operation the nutritional and functional recovery of the facial lingual and cervical muscles was complete. The movements of the face and tongue were dissociated, but when the shoulder was suddenly jerked a wave of muscular contraction was seen to pass from the back of the left side of the tongue toward the tip, so that the movements of the shoulder and tongue are not yet completely dissociated.

16. **Surgical Treatment of Colitis.**—Heaton is firmly convinced that in some cases of chronic colitis, when the symptoms have remained unabated in spite of years of patient medical treatment, a removal of the appendix will sometimes completely cure the patient, and this even when after removal there is apparently little or nothing pathologic in the removed organ. For membranous colitis he prefers appendicostomy. In acute ulcerative colitis surgical treatment is urgently called for. The large bowel must be kept empty and at rest, and yet to starve such patients is to kill them, while rectal feeding is out of the question. An artificial opening is made in the cecum, or the appendix is fixed to the abdominal wall and opened. In chronic ulcerative colitis an appendicostomy with prolonged daily irrigation of the colon will in many cases effect a cure.

19. **Bacillary Infection of the Urinary Tract.**—The prompt action of anticoli serum, the absence of action of a polyvalent antistreptococcus serum, and the uselessness of rectal injection of the anticoli serum seem to be the points of interest in Butler's case.

The British Journal of Children's Diseases, London

May

23 Chronic Rheumatoid Polyarthritis in a Child. O. J. Kauffmann.

V 53
1909

24 General Suppurative Peritonitis Due to Gangrenous Appendicitis and Followed by Subphrenic Abscess; Two Operations; Recovery. A. J. Cleveland.
25 Rheumatoid Arthritis in a Child, Aged Two and a Half Years. J. P. Parkinson.
26 Pancreatic Cyst in an Infant. W. H. Telling and J. F. Dobson.
27 *Frequency of Pulmonary Tuberculosis in Children. J. E. H. Sawyer.

27. **Pulmonary Tuberculosis in Children.**—There were only 19 cases of tuberculosis of the lungs in Sawyer's series of 244 postmortem examinations. The condition of the lungs in the cases of generalized tuberculosis was of recent origin in every instance, and does not seem to have been the starting point for the dissemination of the tubercles. The disease in the bronchial glands was of much longer standing in many of the cases, and it is very probable that the generalized tuberculosis originated from them. The only case in which a fairly large tuberculous cavity in the lungs was found was in a child, aged 6 months, so that considering the age of the patient the disease could only have been of short duration. In the two cases of bronchopneumonia the disease was again acute. In the remaining 7 cases, one child was aged 2½ years and another 1 year and 10 months, so that the disease in the lungs can scarcely be described as chronic. In another child, aged 3 years, with tuberculous meningitis, although the meningeal condition may have been secondary to the disease in the lungs, yet the appearance of the lungs suggested a recent infection. There remained, therefore, 4 cases in which the pulmonary tuberculosis can be described as at all chronic. Of these four cases, only the first child, who died from tuberculous meningitis, and the one who suffered from cerebral tumor of tuberculous origin, can have suffered from pulmonary tuberculosis for any length of time, and only these two appear to present the condition which corresponds to that found in phthisis when occurring in adults. The small caseating foci found in a girl aged 6 years, with fibrosis of the lungs, were of recent origin, and were due to a terminal infection in a fibrosis which was evidently not due to tuberculosis. It is a remarkable coincidence that in one child who died from septic meningitis, due to perforation of the right supraorbital plate by a knitting needle, recent caseating foci were found in the lower lobe of the left lung; but it must be remembered that this was one only out of 244 cases. In none of the others, except one of those suffering from bronchopneumonia, was tuberculosis found only in the lungs and bronchial glands.

In 244 cases of children dying under the age of 15 years, there were found, therefore, at the postmortem examinations only 2 cases in which the condition could be described as phthisis of the adult type, and in all the other 20 cases of tuberculosis of the lungs the disease was either due to an acute affection or one of a comparatively short duration. Sawyer adds, however, that patients suffering from phthisis are not usually admitted to a general hospital, except for some urgent reason; but when it is considered how very frequently phthisis and evidence of past tuberculosis of the lungs are found in the postmortem examinations of adults, and that it was only in 2 cases out of 244 children under 15 years of age that a condition at all comparable with the chronic phthisis of adults was discovered, one must conclude that phthisis is a rare disease during childhood. Sawyer concludes from the results of his postmortem examinations that pulmonary tuberculosis in children presents itself either as part of an acute disseminated tuberculosis, in which the lung condition is also acute, or as a bronchopneumonia of short duration which is tuberculous from the beginning. He has therefore formed the opinion that the latent and chronic form of phthisis as found in the adult is a rare disease in children.

Australasian Medical Gazette, Sydney

April

28 Presidential Address: Work Done by the New South Wales Branch of British Medical Association. G. H. Abbott.
29 Syphilis and Nervous Diseases. A. Davidson.
30 Early Recognition of Tuberculosis. A Plea to the Profession. A. Stewart.
31 Causes, Results, and Treatment, Immediate and Remote, of Injuries of the Genital Tract. R. Worrall.
32 *Rapid Death Due to Acute Septicemia. J. E. Dods.
33 *Barany's Tests in Labyrinthine Affections. G. S. L'Estrange.
34 Septic Conditions of Mouth in Relation to General Medicine. R. Jones.
35 Staining (? Poisoning) by Manganese. A. Palmer.
36 Subphrenic Abscess. A. H. Rutherford.
37 Acute Rupture of Appendix; Peritonitis, Operation; Recovery. F. Clarkson.

32. **Rapid Death Due to Acute Septicemia.**—Dods reports three cases of rapid death, which came under his notice during one week. They were doubtless cases of acute septicemia with a sudden onset and a fatal termination within 24 hours. Prior to the onset of the illness, all three patients were in good health and at work, and in none could the source or entrance of the infection be discovered. The first two died before they were seen by a medical man, and the third was sent to the hospital, but died shortly after admission. The first two cases were reported as suspected plague cases, but as no bipolar bacilli could be found and the guinea-pigs did not appear to be susceptible, the cause of death was ascribed to acute septicemia. No suggestion is offered as to where the seat of infection was, as Dods failed to find any wound or sore in any of the cases.

33. **Barany's Test in Labyrinthine Affections.**—L'Estrange says that it is possible by this method to obtain a further insight regarding labyrinth affections than is afforded by the fork, watch and acoumeter. More especially in cases of deafness with dumbness can a clearer estimate of the nature and extent of the lesion be formed. The vestibular apparatus, the cochlea and the semicircular canals having various functions are differently affected by the test, but further and repeated observations are necessary before any rules can be absolutely laid down. All records he has been able to examine show that of all labyrinthine affections syphilis gives the most constant and marked reaction to Barany's test, and this he has himself found in three patients whom he has been able to examine recently, while in many cases of otosclerosis which are at hand for every aurist the test shows an increased sensibility and a marked increase in duration. Going further, Barany's test will give some indication as to the part of the labyrinth affected, for while affection of the upper part of the basilar membrane of the cochlea renders low tones better heard and an affection of the lower basilar membrane renders high tones better heard, still the variation here is not sufficient to discount the main axiom of lessened perception of low tones in labyrinth affections. Going further, lessened nystagmus with slight disturbance of hearing in a case of labyrinth trouble would point more to a lesion of the semicircular canals than of either the vestibular apparatus or the cochlea, whereas normal or seminormal nystagmus resulting in a case of undoubted labyrinth disease would indicate an affection of the vestibular apparatus and the cochlea to the exclusion of the semicircular canals. Finally, Barany's test helps in the sometimes difficult task of estimating the amount of labyrinth affection when complicated with a middle-ear sclerosis and a central lesion; moreover, it enables us to distinguish with some precision between affections of the vestibular apparatus, the cochlea, and the semicircular canals.

Indian Medical Gazette, Calcutta

May

38 *Inoculation Accident in Manila, in 1906. W. M. Haffkine.
39 Accidental Inoculation with the Virus of Plague. P. C. Freer.
40 Spinal Analgesia. E. E. Waters.
41 Preparation, Assistance, After-Treatment, and Management of Cataract Cases. A. Bakhsh.
42 Splenic Anemia. C. Donovan.

38. This article was published in full in THE JOURNAL, May 15, 1909, p. 1565.

Annales de Gynécologie et d'Obstétrique, Paris

May, XXXVI, No. 6, pp. 257-320

43 *Exophthalmic Goiter in Relation to the Reproductive Function in Women. A. Pinard.

43. **Exophthalmic Goiter and the Reproductive Function.**—Pinard's experience includes nine cases in which exophthalmic goiter showed an unmistakable connection with ovulation. In several, restoration of normal ovulation was accompanied by the subsidence of the exophthalmic syndrome. He does not accept the German view that pregnancy aggravates the tendency to the latter, but rather agrees with Charcot that improvement is liable to follow measures to regulate the menstrual function. In his first case the exophthalmic goiter de-

veloped at puberty, but subsided as menstruation became regular; it returned in typical form during a period of amenorrhea, but subsided again during a pregnancy, and this fluctuation occurred during three pregnancies. In another case exophthalmic goiter developed during a period of amenorrhea and persisted for five years with varying intensity. The genital apparatus was infantile, but it developed between 25 and 30 and menstruation returned and became regular about 30, at which time the exophthalmic triad vanished completely. Pregnancy occurred in the next year; disturbing vomiting occurred at first, ceasing about the fourth month, and conditions have been normal since, for eleven years. The confinement and lactation were normal. In one family exophthalmic goiter was observed in three generations, the affection becoming attenuated or disappearing with regular menses. A number of other cases showed the constant sequence of increasing corpulence, suppression of the menses and development of the exophthalmic goiter. Nearly all these patients were practically cured under treatment which generally included hydrotherapy, restriction to a milk diet or electricity, or all combined. He comments on the case reported recently by H. M. Stowe in which the exophthalmic goiter became apparently aggravated during a pregnancy—his impression being that the alleged aggravation was in reality merely the result of autointoxication and uncontrollable vomiting.

Bulletin de l'Académie de Médecine, Paris

May 18, LXXIII, No. 20, pp. 583-636

44 *Thyroid Instability, and its Paroxysmal Form. Léopold-Lévy, H. de Rothschild and Huchard.
45 Prophylaxis of Infectious Diseases in Sweden and Norway. (La lutte contre les maladies infectieuses en Suède et en Norwège.) F. Widal.
46 *Serotherapy of Gonococcus Septicemia. Dieulafoy.
47 Epidemic Cerebrospinal Meningitis. E. Boinet.

June 1, No. 22, pp. 643-650

48 Advantages of Machine-Made Bread. (Fabrication mécanique du pain.) A. Railliet.

44. **Thyroid Instability.**—Lévy and Rothschild apply the term of thyroid instability to a series of morbid conditions between the extremes of myxedema and exophthalmic goiter. Conditions may be observed in which the symptoms, simultaneous or successive, indicate both deficient and excessive thyroid functioning. This is the result of a general law of nature that an organ functioning defectively strives to restore normal balance, and, when this is reached, is liable to go beyond it with an exaggerated function. In the present communication the authors call attention to a special paroxysmal form of thyroid instability. This comprises a number of syndromes, previously classified as neuroarthritism: migraine, periodical vomiting, asthma, hay asthma, urticaria, eczema, attacks of mucomembranous enteritis and waves of chronic rheumatism. These syndromes are encountered in persons with pronounced thyroid instability, and during the paroxysm the whole picture of thyroid instability is observed, while certain symptoms which form part of it had been hitherto latent. Another argument is the connection between these syndromes and the sexual sphere; owing to the close relation between the ovaries and the thyroid the syndrome sometimes leads to hypoplasia. The most important argument, however, is that thyroid treatment will cure these symptoms and, inversely, thyroid treatment is capable of reproducing them. In myxedema the thyroid functioning is at such a low ebb that there is no reaction for restoration of balance, and the symptoms are continuous. Huchard comments with approval on their work in this unexplored field, and adds that essential paroxysmal tachycardia is probably due to paroxysmal hyperfunctioning of the thyroid. The influence of the thyroid on vascular affections is a further field that will repay study.

46. A similar article by this author was abstracted in THE JOURNAL, June 26, page 2120.

Semaine Médicale, Paris

June 9, XXIX, No. 23, pp. 265-276

49 *Sub-hepatic Peritonitis in Pathogenesis of Hernia. R. Tripier and J. Paviot.

49. **Subhepatic Peritonitis in Pathogenesis of Hernia.**—Tripier and Paviot call attention to the unsuspected frequency of subhepatic adhesive peritonitis and to its importance as a factor in hernia. Traces of such a process were discovered constantly in their last series of eighteen cases of hernia, and they maintain that it is probably responsible for the weakening of the tissues that entails the hernia. The inflammation around the sac has hitherto been regarded as secondary, but careful study shows that it can be traced to a primary focus above.

Berliner klinische Wochenschrift

May 24, XLVI, No. 21, pp. 957-1004

50 Modern Treatment of Diabetes. (Behandlung der Zuckerkrankheit.) G. Rosenfeld.
51 Alimentary Lipemia. J. Leva.
52 Sugar of Milk of No Value in Infant Feeding. (Welchen Wert hat Milchzucker für die Ernährung der Säuglinge?) R. Weigert.
53 An Atypical Colon Bacillus Responsible for Certain Disorders. (Nachweis eines atypischen Bacterium coli als Krankheitserreger beim Menschen.) C. Schöne.
54 *Action of Ultraviolet Rays on the Eye. (Wirkung der ultravioletten Lichtstrahlen auf das Auge.) F. Schanz.
55 Technic and Nature of Seroreaction in Syphilis. (Zum Wesen der Wassermannschen Reaktion.) F. Lesser.

May 31, No. 22, pp. 1005-1052

56 *Diagnosis and Treatment of Tuberculosis of Urinary Apparatus. (Blasen- und Nierentuberkulose.) L. Casper.
57 Nephrolithotomy or Pyelotomy? M. Zondek.
58 Influence of Hydriatic Measures on Size of Heart. (Einfluss hydriatischer Prozeduren auf die Herzgrösse.) A. Selig.
59 Antitrypsin Content of Blood of Mother and Child. (Antitrypsingehalt des mütterlichen und kindlichen Blutes.) G. Becker.
60 Vaccine Therapy. G. Wolfsohn.
61 *Atrophy of Optic Nerve from Atoxyl and Arsacetin. (Augenerkrankungen durch Atoxyl und Arsacetin.) Paderstein.

54. **Action of Ultraviolet Rays on the Eyes.**—Schanz emphasizes the injurious action of the ultraviolet rays on the eyes and the means to attenuate it. Glass, such as is used in photography to filter the light, is useful in eye-glasses to keep out the ultraviolet rays, and he advises the use of glass of this kind for lamp chimneys, electric light bulbs, etc. The artificial lights in use are rich in ultraviolet rays, and generate more, the higher the temperature of the illuminating body. Ultraviolet rays with long waves induce fluorescence in the lens and retina, and tests of this property can be utilized in standardizing the glass.

56. **Urogenital Tuberculosis.**—Casper asserts in the conclusion of this review of his extensive experience that tuberculosis of the kidney always commences on one side and generally remains unilateral for years. Primary tuberculosis of the bladder is extremely rare. Every effort should be made for an early diagnosis, with careful examination in every case of unexplained suppuration or hemorrhage in the urinary passages, and surgical treatment in every operative case. Conservative tuberculin treatment has not to date proved its efficiency, but, after removal of the infected kidney, tuberculin may aid materially in the cure as an adjuvant to instillation of 10 c.c. of a 1/20,000 solution of mercuric chlorid; the next week, 9 c.c. of a 1/15,000, and so on down to 5 c.c. of a 1/1,000 solution, only one instillation a week.

61. **Atrophy of Optic Nerve under Atoxyl Treatment.**—Paderstein tabulates the details of thirteen cases of visual disturbances under atoxyl treatment, including one from his own experience, and Ruete's case of blindness from arsacetin. Total blindness developed in four cases, and only one patient recovered completely; the others were left with considerable contraction of the visual field. The arsenic element is probably responsible for the disturbances.

Correspondenz-Blatt für Schweizer Aerzte, Basle

April 15, XXXIX, No. 8, pp. 257-288

62 *Treatment of Tuberculosis of the Lungs. (Behandlung der Lungenschwindsucht.) H. Erni.

May 1, No. 9, pp. 289-328

63 *Surgery of the Bile Passages. (Chirurgie der Gallenwege.) F. Brunner.
64 *Diphtheria and Antitoxin. (Diphtherie und Heilserum.) P. Schönholzer. Commenced in No. 8.

62. **Treatment of Tuberculosis by Therapeutic Percussion.**—Erni is convinced that the tuberculous process in the apex is spread by mechanical influences, especially by aspiration of the secretions into the bronchi. The cough is seldom powerful enough to expel all the secretion and a focus develops where it stagnates. Retention of the secretion is thus the main fac-

tor in the spread of the tuberculous process. If the secretion can be completely drained away, no secondary processes develop. Treatment should aim, therefore, at mechanical drainage, though the best way to ensure this is still a problem. As an attempt to solve it he applies a systematic course of tapping or knocking on the region—the *Klopfkur*—and the results in 82 cases in the course of fourteen years' experience have been almost constantly good. It is the best means of which he has knowledge for ensuring copious expectoration and effectual drainage, but he hopes that some still more effectual method may yet be discovered. He supplements the therapeutic percussion with inunction of a salve over the lung, containing equal parts of turpentine, salicylic acid and lanolin, ½ part white wax and about 5 parts lard. This is used as for mercurial inunctions, striving thus to disinfect directly the blood vessels and lymph passages in the region beneath. That this is accomplished to a certain extent is shown by the appearance of the drugs in the urine. They do not appear in the sputum as when given internally, but the tuberculous are far too much inclined, he says, to dose themselves with drugs internally and thus ruin their already weak digestion.

63. Surgery in Gallstone Disease.—Brunner reports 43 operations on the biliary apparatus in the last ten years, with the remote outcome. Jaundice was the most reliable symptom of gallstone trouble, being found in 65 per cent. of the cases; typical colic in 46 per cent.; pains in the gall bladder region in 35 per cent., and in the stomach in 54, while a tumor was palpable in 43 per cent.

64. Antitoxin Treatment of Diphtheria.—Schönholzer has been assistant at Krönlein's clinic at Zurich for 28 years, 14 before the introduction of serotherapy of diphtheria and 14 since, and thinks that the present is thus an auspicious moment for reviewing the results of antitoxin treatment. The total number of cases was 3,322 and the mortality 800. The mortality has dropped from 39.7 per cent. in the first period to 13.39 per cent. of all cases in the antitoxin period, and, in the cases with operative treatment, from 66.16 per cent. to 32.54 per cent., and in the medical cases from 14.24 to 6.82 per cent. He is inclined to believe that diphtheria nowadays is less malignant in nature, on the whole, than during the first period.

Deutsche medizinische Wochenschrift, Berlin

May 27, XXXV, No. 21, pp. 913-960

65 *Differentiation of Acute Eruptive Diseases. O. Heubner.
66 *Intravenous Injection of Strophanthin. (Intravenöse Strophanthintherapie bei Verwendung von gratus-Strophanthinum crystallisatum Thoms.) P. Fleischmann and H. Wjasmensky.
67 *Indirect Solvent Influence of Radium on Urates. (Einfluss von Radium auf die harnsauren Salze.) F. Gudzent.
68 *Mixed Tuberculin. (Mischtuberkulin. Polygene Bazillen-Emulsion.) D. Rothschild.
69 Development of Trypanosomes in Glossina. (Weitere wissenschaftliche Beobachtungen über die Entwicklung von Trypanosomen in Glossinen.) Kleine.
70 *Transient Hemiplegia with Migraine. O. Renner.
71 Typical Fractures of the Wrist. (Typische Brüche von Handwurzelknochen.) Granier.
72 *Influence of Uterine Myoma on Childbirth. (Einfluss der Uterusmyome auf die Geburt.) M. Jacoby.
73 Unreliability of Stain Reaction in Diagnosis of Syphilis. (Zur Kritik der Schürmannschen Farbenreaktion bei Lues.) Schminke and Stoeber. Id. E. Melrowsky.

65. Differentiation of the Acute Eruptive Diseases.—Heubner calls attention to serum disease as possibly causing confusion, but it should be suggested by the swelling of the glands, beginning with those in the inguinal region, the leucopenia, the increase in weight as sign of general edema, and the absence of an enanthem in the mouth and throat. He has observed, himself, only one case of the desquamating scarlatiniform erythem distinguished by the tendency to recurrence from six to nine times or more. In concluding his review of the various diseases he dwells on the great importance of a biologic test for differentiation of scarlet fever in an early stage, his experiments in this line being promising, as also those reported lately by Handel and Schultz. The latter obtained positive findings with the complement deviation test in 24 of 31 cases of scarlet fever.

66. Intravenous Injections of Strophanthin.—This communication from the clinic of Professor His reports favorable results from intravenous strophanthin therapy in 32 cases. In certain acute and chronic weaknesses of the circulatory system the strophanthin gave better results than any other drug. It is important to bear in mind the possible action of digitalis previously taken, its effects not having yet died out.

67. Indirect Solvent Influence of Radium on Urates.—Gudzent announces that his research has shown that uric acid circulates in the blood only in the form of a salt—mono sodium urate—and that this sodium urate is responsible for gout. Uric acid forms two primary salts distinguished only by their solubility, the *a* salt being the most soluble. Radium will prevent the transformation into the second, less soluble form, and will even transform the latter back into the *a* form. His experiments have confirmed this fact, proving the possibility of transforming by the action of radium the less soluble sodium urate in the tissues back into the first form, which is twice as soluble.

68. Mixed Tuberculin.—Rothschild cites a number of cases in which tuberculin was used; "old" tuberculin in 52 cases with 40 per cent. cured and 32.7 per cent. improved, and "mixed" tuberculin in 26 cases with 54 per cent. cured and 42 per cent. improved. The "mixed" tuberculin is made from seven different strains of human tubercle bacilli, and he regards this use of several different cultures as a decided progress in the means of stimulating the production of truly specific antibodies.

70. Transient Hemiplegia with Migraine.—Renner ascribes migraine to a vasomotor spasm in the cortical centers. This assumption is sustained by the three cases reported in which periodically recurring migraine was accompanied by hemiplegic conditions which vanished with the other typical symptoms of the migraine within a short time. The transient nature of the hemiplegia speaks in favor of the vasomotor theory.

72. Influence of Uterine Myoma on Childbirth.—Jacoby relates some experiences which show that subserous myomas do not entail any special danger during delivery except when they are located in the cervix. At this point they may prevent delivery by the natural route, although there is a possibility that during labor they may be pushed out of the small pelvis, thus leaving the passage free, as in a case described. Submucous myomas sometimes lead to placenta prævia, in which case the placenta is usually attached to the inner aspect of the myoma. As a further result of the changes in the endometrium the placenta may become pathologically adherent to the wall of the uterus.

Fortschritte der Medizin, Leipsic

May 20, XXVII, No. 11, pp. 529-560

74 Case of Oxycephalia with Atrophy of the Optic Nerve. (Turmschädel mit Sehnervenatrophie.) E. Levi.

Jahrbuch für Kinderheilkunde, Berlin

May, LXIX, No. 5, pp. 505-624

75 Atelectasis of the Lungs. (Lehre von der Lungenatelektase.) E. Ungar.
76 *Treatment of Cholera Infantum with Carrot Soup. (Behandlung der Cholera infantum mit Mohrrübensuppe.) C. Beck.
77 Epidemic of Glandular Fever. (Drüsenfieber Pfeiffer.) K. Schäffer.
78 *Stenosis of the Pylorus in Infants and Children. (Pylorusstenose im Säuglings- und Kindesalter.) Bernheim-Karrer.
79 *Meningeal Phenomena and Bacteriemia in Croupous Pneumonia in Children. (Klinische Beobachtungen und bakteriologische Untersuchungen bei der kruppösen Pneumonie der Kinder.) M. Otten.

76. Carrot Soup Treatment of Gastrointestinal Disturbances in Infants.—Beck reports 85 cases of various gastrointestinal affections in children in which he restricted treatment to a change of the diet to carrot soup. It seems to transform the intestinal flora and thus to arrest gastrointestinal trouble. A pound of carrots is chopped and boiled for an hour or two, mashed and forced through the finest sieve and added to beef tea made by extraction, cold, of a pound of beef in about a quart of water, adding a teaspoonful of salt. The sweet taste of the carrots is relished by the children, and the soup is nourishing, containing about 250 calories to the quart. The child is allowed to drink as much as it wants to after taking the soup, which is given at intervals of three or four hours. One of the chief advantages is that it sup-

pices material for stools so that the intestines do not get out of the functioning habit as on a pure water diet. A number of case histories are appended, which, he says, speak for themselves as to the value of this treatment which gave good results in his hands in the majority of cases.

78. **Stenosis of the Pylorus in Children.**—Karrer gives the tabulated details of 7 additional cases of stenosis of the pylorus which show that even after apparent cure of the trouble the anatomic basis may still persist. In the majority of his cases distinct motor insufficiency was evident two or three years later, with much hyperacidity. As there were no symptoms from this condition he thinks that spasm of the pylorus may be excluded. His experience with these and with a number of other cases has convinced him that congenital hypertrophy of the pylorus may cause no signs of trouble for months or even years.

79. **Croupous Pneumonia in Children.**—Otten reviews his experience with 250 cases of croupous pneumonia in children since 1897. The number of cases has shown a constant increase each year. An initial chill was known in only 39 of the cases and sharp pain in the chest in only 60. As children frequently locate the pain wrong, 4 of the patients were sent to the hospital with the diagnosis of acute appendicitis. Stomach and intestinal symptoms are much more frequent in pneumonia in children than in adults. About a third of the children had colic, vomiting and diarrhea at first. Meningeal symptoms are characteristic of the disease in children, and 34 of the 250 children had brain symptoms during the course of the disease, unconsciousness, delirium, hyperesthesia, stiff neck, etc. The fever was continuous in some, remittent in others or irregular, and the retrogression of the lung process occurred more rapidly than in adults. Sputum was obtainable only in 15 cases. Spinal puncture gave insight into conditions in the meninges. Pneumococci were found in the blood in 9 of the 70 children thus examined, and 5 of the 9 succumbed to the disease. The blood count was taken in 72 cases and leucocytosis was found in about half, generally proportionate to the extent of the pneumonic process. If it keeps high as the disease subsides some hidden suppuration may be surmised. The mortality in the 250 cases was 6 per cent.; one child died from an abscess in the lung; 2 children died from suppurative meningitis; 2 from kidney complications, and 7 from complications in the pleura or pericardium. In one case the pneumonia was evidently the work of the *Streptococcus mucosus*, which was cultivated from the blood.

Medizinische Klinik, Berlin

May 23, V, No. 21, pp. 759-800

80 Microsporon Epidemic. (Die Mikrosporieepidemie in Schöneberg.) Huber.
81 Febrile Manifestations in Late Stage of Syphilis. (Fiebererscheinungen in den Spätstadien der Syphilis.) O. Imhofblon.
82 Treatment of Tabes Dorsalis. G. J. Müller.
83 Menstrual Hyperemia in the Liver. Pregnancy Liver. (Menstruelle Leberhyperämie Schwangerschaftsleber.) O. O. Fellner.
84 Pain in the Heart, and Means of Relieving It. (Herzschmerz.) A. Selig.
85 Leather Apparatus for Extension. (Lederstreckverbände aus Chrom- oder Formalinleder als chirurgische und orthopädische Universalapparate.) Evler.
86 Importance of Combination of Mercurial Treatment with Sulphur Baths. (Ist die Kombination von Quecksilberkuren mit Schwefelbädern rationell?) R. Schuster.
87 Distribution of Radium Emanation in the Atmosphere. A. Gockel.

May 30, No. 22, pp. 801-836

88 *Cholecystitis. O. Föderl.
89 *Causes of Nervousness; Treatment and Prophylaxis. A. Cramer. Commenced in No. 21.
90 Does the "Minimum" Law Apply to Lime and Iron? (Gilt v. Bunges Gesetz des Minimums für Ca und Fe?) W. Stoeltzner.
91 Iodized Benzin for Disinfection. (Verwendung des Heusnerschen Jodbenzins.) Esau.
92 *Adequate Nourishment and Capacity of Assimilation. (Adäquate Ernährung und Assimilationsfähigkeit des Organismus.) A. Sperling.
93 *Radioactive Sediment in Kreuznach Mineral Waters. (Gewinnung Radioaktiver Substanzen aus den Rückständen der Kreuznacher Quellen und Ihre therapeutische Verwendung.) F. Engelmann.
94 Uterine Douches of Superheated Air. (Heissluft-Uterusduschen.) P. Grabley.
95 *Experimental Research on Motor Functioning of Stomach. (Zur Lehre von der Motilität des Magens.) H. Roeder.
96 Practical Application of Opsonin Control in Tuberculosis. (Notwendigkeit der Opsonin-Kontrolle bei Behandlung Tuberkulöser.) D. Rothschild.
88. **Gall Bladder Disease.**—Föderl concludes his review of cholecystitis with the remark that when the gall bladder is incapable of normal functioning in consequence of serious changes it is not only useless but is a decided source of danger which it is safer to remove. He always examines the appendix, if possible, in operating for gallstones, and found periappendicular changes in the majority of cases. He has also encountered a number of cases of recurring gall bladder inflammation in patients whose appendix had previously been removed. The same cause responsible for the recurring appendicitis was probably responsible also for the recurring cholecystitis.

89. **Causes and Treatment of Loss of Nervous Balance.**—Cramer explains the tendency to undue nervousness as the result of over-fatigue of the neuron, either from excessive demands on it or from morbid readiness to fatigue. When the balance between assimilation and outgo is disturbed the neuron is unable to recuperate fully during rest and sleep and grows more and more readily irritable. The causes for the disturbance may be endogenous or exogenous; the former includes all cases with traits of hysteria. He regards the compulsory term of military service as a great blessing for the young men of the nation, compelling them to habits of exercise and hygiene which would be sadly missed in case military service were abolished. He concludes his article with an appeal for sanatoriums for nervous prostration among those unable to pay much if anything for treatment such as the rich now have at their command. A few sanatoriums of this kind would aid materially in the prophylaxis against insanity and would restore large numbers of the predisposed to health.

92. **Capacity of Assimilation.**—Sperling points out that repeated overdistention of the stomach finally stretches the tissues a little beyond what their elasticity can repair; the gland substance is thus stretched a little, the blood vessels, mucosa, nerves and serous covering all experience a little disturbance from the stretching, merely molecular at first, but then follow retention and stagnation of food, blood and lymph. The resulting disturbances are generally at first classed as purely nervous, but they deserve closer study and proper differentiation; the diet should be regulated to prevent their development. Almost all kinds of disturbances in the health commence first, as a rule, in the digestive tract, including those generally classed now as "purely nervous." The food should be chosen to ensure assimilation, and the amount reduced to correspond to the digestive forces.

93. **Radium Emanations in the Kreuznach Waters.**—Engelmann reports therapeutic experiences with the waters and sediment which are known to be very rich in radium emanations. These radium baths were given to 234 patients—a total of 2,595 baths, the principal indications being rheumatism, sciatica, neuralgia, gout and resorption of pelvic exudates. The results are considered as very promising.

95. **Motility of the Stomach.**—Roeder has been conducting extensive research on the motor functioning of the stomach in dogs with a Pawlow fistula, mainly to determine the influence of physiologic, chemical and thermic stimulation on the motility of the stomach. Carbonic acid proved to have a marked influence in stimulating the motor functioning, as also a temperature above or below that of the body and a higher or lower osmotic pressure. Physiologic salt solution is much longer in leaving the stomach than a hypotonic or hypertonic solution; this was observed even when the temperature was warmer or cooler than that of the body.

Münchener medizinische Wochenschrift

May 25, LVI, No. 21, pp. 1057-1112

97 *Otitis Media and the General Practitioner. (Drei Vorträge aus dem Gebiete der Ohrenheilkunde.) H. Schwartze.
98 *Importance of Cammidge Test in Determining Indications for Treatment of Gallstones. (Bedeutung der Cammidgeprobe in der Indikationsstellung bei der Gallensteinkrankheit.) H. Kehr.
99 *Treatment of Paralysis of the Arm. (Behandlung der Lähmungen an der oberen Extremität.) O. Vulpius.
100 Copper in Canned Foods. (Ueber Kupferung von Konserven.) K. Spiro.
102 Instantaneous Roentgen Exposures. (Röntgenmomentaufnahmen.) F. Dessauer.
103 *Importance of Serореaction in Syphilis. (Bedeutung der Wassermannschen Serodiagnose für die Praxis.) A. Neisser.

97. **Otitis Media and the General Practitioner.**—Schwartze relates unfavorable experiences with constriction hyperemia in suppurative disease of the middle ear. Notwithstanding the relief of pain after application of the elastic band to the neck, the work of destruction still goes on, and sudden chill and fever may reveal the development of thrombophlebitis. This hyperemic treatment is permissible only in the mildest cases, free from suspicion of intracranial complications. Massage may be useful to promote absorption of exudates and in relief of tormenting subjective sounds in the ear, and he advises it as an adjuvant to other measures, especially when the lymph glands in the side of the neck and below the mastoid process are enlarged. The various apparatus on the market for instrumental massage have never induced permanent benefit in his experience, and it is possible that their incautious use may do harm. A little temporary benefit may be derived in cases of incipient ankylosis of the ossicles or adhesions. In treatment of otosclerosis he has never witnessed striking benefit from potassium iodid, but in cases of syphilitic labyrinthitis less than six weeks in duration prompt recovery follows mercurial inunctions; labyrinthine deafness of longer standing is generally incurable. He has frequently obtained good temporary effects in otosclerosis, especially with simultaneous hyperemia of the labyrinth wall, by systematic sweating with hot air baths. This relieves the congestion in the temporal bone and inflammation is favorably influenced. He has never witnessed any harm from the superheated air applied to the patient in bed; the effect on the heart, of course, is watched. Little is to be hoped from technical-mechanical and operative measures in otosclerosis, but it is a broad field for rational internal treatment of the true cause—the dyscrasia—by general treatment, tonic, revulsive, soothing or antirheumatic, not forgetting the frequently accompanying neurasthenia. Warm saline baths and courses of mineral waters are also useful. Cold water treatment should be avoided, especially sea bathing. He advocates leeches for beginning acute otitis media; they are applied in front of the tragus, over the large venous plexus. This not only relieves the pain, but aborts the inflammation and wards off suppuration. If there is already tenderness at the mastoid process or edema, leeches are contraindicated and the ice bag behind the ear or incision is required. He defends the use of leeches, citing the ophthalmologists to show that they are indispensable in certain cases.

98. **Cammidge Test in Gallstone Disturbances.**—Kehr reports instructive findings with the Cammidge test in 58 cases of gallstone affections in which secondary injury of the pancreas was suggested by the symptoms. In 22 cases in which he operated, the findings of the test were confirmed by the operation in all but 2 instances; in one of these there was a cancer in the common bile duct. The other case suggests that the test is more reliable in the chronic form of pancreatitis than in the acute, as constantly negative Cammidge findings were obtained, although symptoms and operative findings indicated sudden, acute necrosis of the pancreas.

99. **Treatment of Paralysis of the Arm.**—Vulpius describes the relief of severe functional disturbances by correcting the excessive inward rotation after separation of the epiphysis; this is accomplished by osteotomy of the humerus at the point of attachment of the deltoid muscle, followed by plaster immobilization in extreme outward rotation and horizontal abduction. The success in the two cases described commends this osteotomy of the shaft for all such cases of false and true obstetric paralysis of the arm.

103. **Serodiagnosis of Syphilis in General Practice.**—Neisser reiterates that the Wassermann test reveals syphilis with such certainty that nothing would induce him to dispense with it now. Positive findings are a distinct symptom of existing syphilis and repeated negative findings are extremely valuable for a favorable prognosis, although the test is not infallible in every case. It is as important for the general practitioner as the microscope for gonorrheal secretions.

Therapeutische Monatshefte, Berlin

June, XXIII, No. 6, pp. 297-352

104 Importance and Measurement of Resistance of Human Skin to the Galvanic Current. (Pharometric.) F. Frankenhäuser.

105 Negative Action of Tobacco Smoke on Aorta in Tests on Rabbits. (Zur Frage der Tabakrauchwirkung auf die Aorta.) A. Ollendorff.

106 *Action of Bitters on Absorption in Digestive Tract. (Wirkung der Bitterstoffe auf die Resorption.) W. Heubner and K. Rieder.

107 Middle Ear Disease in Infants, especially those with Nutritional Disorders. (Die klinische Bedeutung der Otitis media des Säuglingsalters insbesondere beim ernährungsgestörten Kinde.) H. Rietschel. Commenced in No. 5.

108 *Hydriatic Treatment of Burns and Other Defects in the Skin. (Hydriatische Behandlung von Hautdefekten.) W. Wirz.

106. **Influence of Bitters on Absorption.**—Heubner and Rieder relate experiments which seem to indicate that the influence of bitters on the digestion is the result of their action on the motor function of the stomach. Animals taking small amounts of bitters continuously had the stomach filled with food even fifteen hours after the meal. In many cases of stomach trouble, retention of the food in the stomach for a certain time may favor its digestion. This may explain reflux of the bile into the stomach, sometimes observed with food that is difficult to digest, and also the craving for bitters at times.

108. **Treatment of Burns and Other Defects in the Skin.**—Wirz has been successful during the last fifteen years with hydriatic treatment of burns, etc., according to the method introduced by Winternitz, but which has not been adopted as widely as it deserves. The aim is to relieve the pain and to supply an artificial skin, that is, to cover the defect with a substance that answers the same purpose as the skin. The substitute for the skin which assumes its functions best is a piece of thin linen fitting close over the defect and held immovable by strips of plaster around the edges or applied as a roller bandage. This linen is left for two or three days, kept constantly moist and cold by a compress above, six or eight layers thick, renewed at first every minute, as the cold reduces the pain. Later the intervals can be lengthened to five minutes or longer, and by the second day the compress may not need renewing for hours at a time. A temperature of 50 F. is most effectual at first, but later up to 68 F. may be used. The congestion must be combated by bed rest, the burned part raised a little. This dressing supplies a perfect cover for the wound, protecting the exposed terminals of the sensory nerves from irritation; the secretions become organized under this protecting shield, so that the resulting scar is much less disfiguring than with other technics. This method makes great demands on the attendants, but the more rapid healing and the fine cosmetic results repay the extra care. Winternitz leaves the linen for a week, merely rinsing it frequently, but Wirz changes it by the third day.

Therapie der Gegenwart, Berlin

May, I., No. 5, pp. 217-264

109 *Treatment of Cerebral Paralysis. (Therapie zerebraler Lähmungen.) M. Rothmann.

110 Historical and Critical Study of Artificially Induced Pneumothorax in Pulmonary Tuberculosis. (Künstlicher Pneumothorax bei Lungenschwindsucht.) S. Daus.

111 Action of Glutaric Acid on Phloridzin Diabetes. (Wirkung der Glutarsäure auf den Phloridzindiabetes.) G. G. Wlenko.

112 *Nervousness in Children. (Kindernervosität und Nervöse Kinder.) A. Baginsky. Commenced in No. 4.

113 The Newer Methods of Anesthesia. (Ueber neuere Anästhesierungsmethoden.) W. Busse.

109. **Cerebral Paralysis.**—Rothmann mentions in the course of this study that treatment should be in three phases: first directed against the incipient flaccid paralysis, then aiding to assist restoration of motor functioning, and, finally, the combating of the residual hemiplegic paralysis. The first absolute indication is to keep the head still during the first few days after the stroke, but the position of the arms and legs must be carefully supervised. The tendency in hemiplegia to turn on the paralyzed side causes the paralyzed limbs to be compressed and injured if the compression is long kept up. It is necessary, therefore, to attend to the position of the leg and arm, possibly holding them in place by straw cushions. Passive movements of the limbs should also be carried out from the very beginning. This prevents development of painful affections in the joints, especially in the shoulder, which otherwise are liable to occur from the traction of the relaxed capsule of the joint. The systematic passive movements also aid in the restoration of function in the lower motor centers in the brain. Cautiously done, no injury on the brain process

need be feared. Massage helps materially to promote the process of restitution in the paralyzed vasomotor nerves. The position of the leg should be regulated by its most important function as the support for the body, and thus it should be extended, while the arm requires extension of the hand and fingers to prevent contracture. If the constant current is applied in these early stages the muscles in the arm and leg are aided in restitution which occurs spontaneously only very late or not at all. After the first active movements have appeared, they must not be exercised too much. On the contrary, it is important to begin over again each time, first placing the limb in the proper position, then passive movements, galvanization, massage and efforts to induce active innervation, thus striving to act on the weaker groups of muscles which are less inclined to restitution. The first active movements should be extensive, co-ordinated ones, not single movements. Stimulation of the cortical motor center, cultivation of still existing connections with the cortex and of the innervation of the different groups of muscles of the arm and leg—these points in treatment of cerebral hemiplegia lead to good results.

112. **Nervousness in Children.**—Baginsky gives a comprehensive review of the various abnormal manifestations of nervousness in children as observed in his own practice, discussing the causes, treatment and prognosis of all kinds of functional and organic nervous disturbances. Among the points emphasized is the necessity for investigating the environment in every case. This he does before concentrating his attention on the child, and reports several striking cases to show the necessity for this. The most remarkable, perhaps, was the case of a girl of 12 whose brother-in-law summoned him on account of habit spasms. The man was a physician from Russia and displayed a pronounced tic as he spoke. Arrived at the house, the young man's wife presented the same tic, which was also the trouble in the girl. Each member of the family had the same pronounced spasmodic movements, but each disregarded his own tic while urging medical aid for the others. The only treatment would have been to separate the entire family and treat each member in a different environment, but this was refused, and Baginsky gave up the case, the family leaving town with their tics unmodified. The lesson from this case has proved a great help in treating others; as a rule, the children are not the ones that are sick, but rather the adults with whom they live. He has noticed that the children in the families of stock brokers, lawyers and merchants with a tendency to neurasthenia, are distinguished by unusual restlessness and impatience. The vasomotor innervation in these families is more unstable, and the tendon reflexes are exaggerated. It has always seemed to him that the father participates more in bequeathing this nervous tendency than the mother. In one case the apparently normal child cried constantly, night and day. He examined the child repeatedly, but nothing could be found to explain its trouble, and the child seemed to be thriving. The explanation developed by the end of the year in the appearance of an itching urticaria resisting all treatment until the child gradually grew out of it in its third year. It had probably been born with an itching in the skin, which gave no objective signs for months. In regard to the influence of alcohol, he mentions a case in which a healthy child in the family of an ambassador suddenly developed convulsions recurring at regular intervals and probably to be ascribed to the bottle of red wine given the wet nurse occasionally as a special treat. She was accustomed to wine, but as soon as the red wine was discontinued the child's attacks of convulsions ceased. He insists on the importance of preparing a child for an operation or other intervention, as the nervous shock from the surprise of an unanticipated operation on tonsils or adenoids is liable to induce severe nervous depression, persisting for months. He has witnessed a number of cases of this intense nervous depression in the children of Russian refugee families, which it will require years to overcome. Entire loss of appetite seldom reaches such intensity as in one of his cases in which an otherwise healthy little girl of 4 or 5 refused to eat and vomited what she was compelled to take, finally succumbing to inanition. Nervous torticollis has frequently led to useless operations, but its sudden appearance and spontaneous disappearance and recurrence indicate its nervous nature. Nervous joint affections are distinguished by the lack of signs of inflammation. Treatment should be by the gentlest measures, winning the confidence of the child. Keeping him in bed sometimes has as favorable an action as with adults. Children must always be told beforehand and prepared for whatever is to be done. Institutional treatment may work wonders in the severer cases. The aim in treatment should be to avoid unnecessary therapeutic measures but, if they are required, not to shrink from energetic means. Sympathy, paternal pedagogic earnestness and infinite patience are the key to success.

Virchow's Archiv, Berlin

May, CXCVI, No. 2, pp. 193-384

114 Atresia of Small Intestine. (Zur Frage der kongenitalen Dünndarmatresie.) S. Ciechanowski and L. K. Glinski. Commenced in No. 1.
115 Multiple Internal Deformities in an Infant. (Multiple Hemmungs- und Defektbildungen bei einem neugeborenen Kinde.) M. Koch.
116 Genesis of "Starchy Bodies" in the Lungs. (Genese der Corpora amylacea in den Lungen des Menschen.) K. Nunokawa.
117 *Nature of Arteriosclerosis. (Wesen der Arteriosklerose.) T. Sumikawa.
118 *Cause of Arteriosclerosis. (Ursache der Arteriosklerose.) W. H. Harvey.
119 *Connection between Kidney Edema and Arteriosclerosis. (Beziehungen des renalen Oedems zur Arteriosklerose.) A. Heineke.
120 Fat in Interstices in the Kidney Medulla. (Fett im Markinterstitium der Niere.) F. Prym.
121 Genesis of Tumors. (Genese der Geschwülste beurteilt nach den Erfahrungen der Missbildungslehre.) E. Schwalbe.
122 *Multiplicity of Primary Malignant Tumors. Metaplasia. K. Beck.
123 Tumors in the Pleura. Ribbert.
124 Mucus-Forming Cystadenoma in the Bladder. (Ein schleimbildendes Cystadenom der Harnblase.) R. Bayer.
125 Genesis of Metastatic Carcinoma in the Peritoneum. J. Misumi.

117-118. **Nature of Arteriosclerosis.**—Sumikawa reports the microscopic findings in 96 cases of arteriosclerosis, showing that the trouble is a chronic, hyperplastic inflammation, commencing in the deepest layer of the intima. The intima tissue is less compact than the other parts of the artery wall and there is thus a little discrepancy between the stretching and elastic contraction of these layers, setting up irritation both laterally and longitudinally as the walls expand and as the blood stream forces the looser tissue along with its current. Harvey describes research which ascribes arteriosclerosis to changes in the blood pressure, his experiments confirming the close connection between high blood pressure and the affection.

119. **Connection Between Dropsy and Arteriosclerosis.**—Heineke reports a case which demonstrates anew the close connection between contracted kidney and arteriosclerosis of the small arteries in the organs. His patient was a comparatively young woman and the extreme arteriosclerotic changes in the large vessels developed promptly after the dropsical kidney affection had settled down into a chronic phase. The small and medium arteries to the organs were normal but the large and medium arteries in the limbs were in advanced sclerosis. The kidney affection had lasted only fourteen months in this case, and he is convinced that kidney affections with a tendency to dropsy are peculiarly liable to be accompanied by arteriosclerosis. The same kidney affection, if unaccompanied by dropsy, does not entail arteriosclerosis in the young, even when the blood pressure is extremely high, while, with the dropsy, the arteriosclerosis rapidly develops.

122. **Multiple Primary Malignant Tumors.**—Beck reports a case and comments on the rarity of such occurrences. He is inclined to attribute this rarity to a possible immunization of the system from the first malignant growth, preventing the development of others as a rule.

Wiener klinische Wochenschrift, Vienna

May 20, XXII, No. 20, pp. 699-736

126 Augenbrugger, the Inventor of Percussion. (Leopold Augenbrugger.) M. Neuburger.
127 Experimental Arteriosclerosis. A. Biedl and L. Braun.
128 *Functioning of the Kidneys and Prostatectomy. R. Paschkis.
129 Hydatid Cysts in the Thyroid. (Zwei Fälle von monolokulärem Echinokokkus der Schilddrüse.) R. R. V. Ulrzmann.
130 Anatomic and Clinical Conception of Arteriosclerosis in its Relation to Certain Morbid Conditions in the Skin. K. Ullmann. Commenced in No. 19.

V 53
1909

May 27, No. 21, pp. 737-776

131 *The So-called "Uric Acid Pains." (Harnsäureschmerzen.) F. Pineles.
132 *Cardiospasm. W. Zweig.
133 Habitual Constipation. (Klinisches und Experimentelles zur Lehre von der chronischen habituellen Obstipation.) E. Biernacki.
134 Nature of Complement-binding Substances in Syphilis. (Natur der komplementbindenden Stoffe bei Lues.) H. Toyosumi.
135 Idiopathic Epiphora of Nasal Origin. J. Weleminsky.
136 *Prognosis of Acute Anterior Poliomyelitis. M. Berliner.

128. **The Functioning of the Kidneys and Prostatectomy.**—In this communication from Zuckerkandl's surgical service, read at the recent German Urologic Congress, Paschkis gives the details of sixteen cases of retention of urine from enlargement of the prostate in which systematic chromocystoscopy revealed the actual functional capacity of the kidneys. It was thus possible to sift out the cases in which the lesions were irreparable and prostatectomy offered little chance of relief. The urine was examined for chlorids, urea, specific gravity and albumin, and then 4 c.c. of a 4 per cent. suspension of indigocarmin in salt solution was injected into the gluteal muscle, and the interval before the blue tint of the urine became apparent, the intensity of the tint and the length of its appearance were all noted. When this indigocarmin test shows that conditions are improving under systematic catheterization or permanent drainage, the course of the case confirms the assumption that the kidneys are capable of approximately normal functioning. It is amazing, he says, to note the improvement in patients so debilitated that permanent lesions of the kidneys seemed more than probable. Systematic repetition of the indigocarmin test will reveal the cases in which prostatectomy promises permanent benefit, thus avoiding an important factor in the mortality. In four of his cases the test showed impairment of kidney functioning at first, but improving rapidly under treatment, and after the prostatectomy the test gave constantly normal findings, showing that the prostatectomy had induced complete restitution, confirming the subjective and objective benefit of the operation.

131. **"Uric Acid Pains."**—Pineles has been studying these pains in 110 cases besides 17 other cases in which an organic lesion was found to explain them. His analysis shows that, in two-thirds of these cases, these uric acid pains are in reality painful sensations connected with functional disturbances in the sexual apparatus, and this is also probable in many of the others. There is a great difference between them and the pains of true gout, both in regard to the age and sex, the location of the pain and the purin metabolism; not a single feature shows any connection between them and the uric acid metabolism, while everything favors the assumption of a genital pseudo-gout which may be classified as a climacteric, senile and nervous.

132. **Cardiospasm.**—Zweig states that psychic influences are important in treatment; the patient must be tranquilized and taught to practice swallowing movements before meals, as this helps in relaxing the cardia. Diversion during the meal, change of the meal hours and change of environment will sometimes help to cure. One of his patients was freed from the spasm when he ate alone in his room. The moment any one looked at him while he was eating the spasm recurred. Regulation of the diet is important; some patients do better with solid foods and others with fluid. A tablespoonful of pure olive oil before the meal in some cases prevents the contraction. Instead of the pure oil, a mayonnaise of oil and eggs is sometimes taken with less repugnance. The food must be soft and prepared with a great deal of butter or cream. Sedatives may do good in the mild cases, especially belladonna. In the chronic cases the accumulated mucus and débris must be thoroughly washed out, with, possibly, instrumental dilatation of the cardia. He has treated a patient in this way, with an inflatable bag, with excellent results, but this treatment has to be repeated now and then as no instance of a permanent cure by this means has been reported. Dilatation through the opening in the stomach has been successfully done in 12 cases on record. On the whole, he regards chronic cardiospasm as a serious condition, with an unfavorable prognosis in respect to its curability.

136. **Prognosis of Poliomyelitis.**—Berliner gives the details of 14 cases at Vienna last fall. Four of the children died but the others recovered under salicylate and electricity, the improvement sometimes not appearing until after several months. Electric treatment was certainly an important factor in the recovery, each sitting displaying marked benefit.

Zentralblatt für Chirurgie, Leipsic

May 29, XXXVI, No. 22, pp. 785-824

137 Operative Treatment of Old Empyema. E. E. Goldmann.

Zentralblatt für Gynäkologie, Leipsic

May 29, XXXIII, No. 22, pp. 753-800

138 Placenta Prævia. W. Hannes. Id. Richter.
139 Bacteriologic Diagnosis of Puerperal Fever. Pankow.
140 Allowing Women to get up Early after Childbirth. (Zum Frühaufstehen der Wöchnerinnen.) A. Hüffell.
141 Technic for Extraperitoneal Cesarean Section. (Die Blasenfüllung bei meiner Methode des extraperitonealen Kaiserschnittes.) W. Latzko.
142 Measures to Protect Mother and Child During Pregnancy and Puerperium. (Wochenschutz.) T. H. van de Velde.

Gazzetta degli Ospedali e delle Cliniche, Milan

May 18, XXX, No. 59, pp. 625-632

143 Action of Colon Bacillus in Bismuth Poisoning. (Azione del bacterium coli in relazione agli avvelenamenti da sottonitrato di bismuto.) P. Barabaschi.

May 20, No. 60, pp. 633-640

144 Importance of Proportions between Framework of the Chest and the Heart for the Functioning of the Latter. (Importanza dei rapporti fra scheletro toracico e cuore per il normale funzionamento di questo.) E. Silvestri.

May 23, No. 61, pp. 641-656

145 *Pathology of Female Genital Apparatus in Relation to Work. (La patologia dell'apparato genitale femminile in rapporto col lavoro.) L. M. Bossi.
146 *Disguised Malaria. (Il concetto della malaria larvata.) F. Musone.

145. **Pathology of the Female Reproductive Organs in Wage-Earners.**—Bossi deplores the scant attention that has been paid to this subject as the increasing participation of women in the industries is rendering it more and more important. He discusses prophylactic measures, saying that the present conditions menace the future of the race, the affections in the female genital sphere not only threatening future generations but by the loss of nervous and moral balance which so often accompanies utero-ovarian lesions, the peace of the household is destroyed. He criticises the proposed legislation to provide for rest for the working woman after delivery, saying that it neglects to provide for rest during the last months of pregnancy when it is equally needed. It further makes no distinction between miscarriage and normal delivery, which he regrets as liable to favor criminal abortion, while the woman after an abortion is not debilitated by the nursing and care of the child. The displacements that are liable to be induced by certain kinds of work; the inflammation in the genital organs which the trauma of the work keeps up, and the physiologic crises of the menses should all be studied with a view to prophylactic measures. Fibromyoma is liable to develop from the interference with the circulation in certain forms of work requiring long sitting, and hematocele from long standing. The general depression of the vitality from the industrial conditions and strenuous attention required, prepare conditions liable to transform an otherwise mild into a malignant affection.

146. **Disguised Malaria.**—Musone discusses the various forms and reports some cases in which malaria was associated with other diseases. The other affection may interfere with the absorption of the quinin, as in dyspepsia, alkaline fermentation or chronic catarrh of the stomach, so that the therapeutic test may give negative results. In meningitic malaria the complexion and daily fluctuation of the symptoms reveal the malarial origin; in true meningitis the symptoms continue a constantly progressive course. The spleen is more enlarged in malaria, and malarial meningitis may subside, a condition which seldom occurs in true meningitis.

Policlinico, Rome

May, XVI, Surgical Section, No. 5, pp. 193-240

147 *Lumbar Puncture in Diagnosis and Treatment of Trauma of the Head and Spine. (Puntura lombare nella diagnosi e nella terapia dei traumi cranio-encefalici.) R. Malatesta.

148 *Gangrene of the Legs. (Gangrena delle estremita inferiori.) A. Vetri.

149 *Hernia of the Bladder. (Ernia della vescica.) F. Mastrosimone. Commenced in No. 4.

May, Medical Section, No. 5, pp. 193-240

150 Toxic Syndromes in Relation to the Non-Dializable Constituents of Urine. (Sul comportamento del contenuto non dializzabile delle urine, nell'uremia, nella nefrite, in rapporto alle differenti diete [carnea e lattea], ed in un caso di peritonite da perforazione.) S. Mancini.

151 Hemolytic and Nerve Destroying Action of Spider Poison. (Sul potere emolitico del veleno dell'aracnide "Latrodectes tredecim guttatus" e alterazioni istologiche da esso indotte sul sistema nervoso centrale.) O. Pini.

152 Effects on the Kidney of Puncture of the Fourth Ventricle. (Effetti sul rene della puntura del IV ventricolo cerebrale.) A. Capogrossi.

153 *Blood Plates in Malaria. (Le piastrine del sangue nella infezione malarica.) G. Fornaca.

147. **Lumbar Puncture in Diagnosis and Treatment of Trauma of the Head.**—Malatesta reports nine cases in detail to show the benefit derived from lumbar puncture as a diagnostic and therapeutic measure. When there is a varicose tendency the meninges may share in it, and the cerebrospinal fluid may be hemorrhagic without any lesion in the cerebrospinal axis. This occurred twice in his experience with lumbar puncture for spinal anesthesia in 600 cases. One of the varicose patients had leg ulcers and the other hemorrhoids. A hemorrhagic cerebrospinal fluid therefore should be estimated very cautiously in patients with varicose lesions elsewhere. The relief in the traumatic cases after some of the fluid had been withdrawn by spinal puncture was marked in every instance, and the puncture was repeated several times in some cases. In all cases of trauma of the skull in which expectant treatment is justified, lumbar puncture will permit the diagnosis of intracranial hemorrhage, and by repeated puncture its course can be determined. The puncture permits the escape of the extravasated blood and relieves the compression. The retained blood is liable to decompose and cause production of toxins that will injure the nervous tissue still further, the effect shown in stupor, fever and delirium. He agrees with Ferretti that whatever may be the mechanism of the action of lumbar puncture, it is certainly to be commended when doomed to inaction otherwise, as the simple and easy little intervention may induce far-reaching beneficial effects. Nearly three pages of bibliographic references on the subject are appended

148. **Gangrene of the Legs in Pneumonia.**—Vetri's patient was a previously healthy ix-para of 42, at the ninth day of pneumonia when symptoms of gangrene developed in the left leg; the right leg became similarly affected fifteen days later. Amputation of both legs failed to arrest the fatal outcome and autopsy confirmed the assumption that the trouble was the result of inflammatory changes in the walls of the vessels with thrombosis and embolism. The only possible cause known for the trouble was the pneumonia. He reviews the similar cases on record of gangrene in acute infectious diseases, noting the involvement of both sides, although not symmetrical, in most of the cases. In his case the gangrene came on gradually and progressively, invading the left leg from the toes to the upper third of the thigh and the right to the knee.

149. **Hernia of the Bladder.**—Mastrosimone reports seven cases and reviews others on record and the results of experimental research, all of which confirm the opinion that it is almost impossible to recognize beforehand the involvement of the bladder in the hernia, and even during the operation, if the tissues are healthy, the bladder wall is not recognized easily unless the possibility of its involvement is borne carefully in mind. If the bladder wall is gangrenous it is impossible to recognize it. For the bladder to become involved in a hernia it has to be abnormally high and its walls less firm than usual. If the bladder wall has been opened, the herniotomy wound should not be entirely sutured at first.

153. **The Blood Plates in Malaria.**—Fornaca summarizes 30 cases of malaria in which the blood plates were noted, calling attention to the characteristic reduction in their number during the fever and their return to normal under the influence of quinin. The behavior of the blood plates is liable to have differential value in certain cases.

Riforma Medica, Naples

May 17, XXV, No. 20, pp. 533-560

154 Resection of Stomach for Gastric Ulcer. (Caso di resezione di stomaco per ulcere gastriche.) G. Cocci.

155 The Speech Center and Motor Aphasia. (Centro di Broca e afasia motrice.) E. Benvenuti. Commenced in No. 19.

May 24, No. 21, pp. 561-588

156 *Anatomic and Clinical Study of Four Cases of Nasopharyngeal Fibroma. U. Zandonini.

157 Callus Formation after Contusion of Muscles. (Esito raro di contusione muscolare.) S. Rolando.

May 31, No. 22, pp. 589-616

158 Origin of Gallstones. (Sulle teorie per la patogenesi dei calcoli biliari e contributo all loro produzione sperimentale.) O. Marchetti.

159 The Graphic Method Applied to Registration of the Pulse in the Esophagus. (La pulsazione cardio-esofagea nell'uomo in condizioni fisiologiche e in alcuni stati morbosi del cuore.) D. Pace.

160 *Four Cases of Perforating Ulcer of the Foot Cured by Stretching the Nerve. (Cura dell'ulcera perforante del piede mediante lo stiramento dei nervi.) G. Piccioli.

156. **Nasopharyngeal Fibroma.**—Zandonini has found signs of an inflammatory process in the upper air passages so constantly with fibromas that he is inclined to ascribe etiologic importance to it. The fibroma may retrogress, and consequently palliative measures are justifiable if the patient is at an age when such involution is liable to occur. But in the young the growth should be radically removed and he describes four cases in which he did this with success.

160. **Stretching the Nerve in Treatment of Perforating Ulcer of the Foot.**—Piccioli reports four cases after reviewing the history of this method of treatment. His patients were men between 36 and 58, and the case histories confirm anew the neuropathic origin of such lesions. The plantar nerve was the one stretched in one case and the tibialis in the others, but the results observed suggest that it might be still better to stretch the sciatic nerve instead, as liable to have a more decided effect, especially on the spinal nerve centers. The procedure was supplemented by careful toilette of the ulcer, placing it in the most favorable conditions for healing, although cases are on record in which the stretching of the nerve alone, without this, proved effectual. Local anesthesia was employed and the result was permanent in three cases; in the fourth, one of the bilateral lesions recurred; the patient was a syphilitic, much addicted to alcohol, and the ulcer displayed a tendency to gangrene. The conditions in the circulation were evidently too serious for possibility of recuperation in this case.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

SYMPTOMS AND THEIR INTERPRETATION. By James Mackenzie, M.D., M.R.C.P., Physician to the West End Hospital for Nervous Diseases, London. Cloth. Pp. 297. Price, 7 shillings 6 pence. London: Shaw & Sons, 7 and 8 Fetter Lane, E. C., 1909.

A MANUAL OF OPERATIVE SURGERY. By Sir Frederick Treves, Bart., G.C.V.O., C.B., LL.D., F.R.C.S., Consulting Surgeon to the London Hospital, and Jonathan Hutchinson, F.R.C.S., Surgeon to and Lecturer on Surgery at the London Hospital. Edition 3, in Two Volumes. Vol. 1. Half Morocco. Pp. 775, with 193 engravings and 17 full-page plates. Price, $6.50. Philadelphia: Lea & Febiger, 1909.

TRANSACTIONS OF THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS. Vol. XX. For the Year 1907. Cloth. Pp. 319.

LEHRBUCH DER MAGENKRANKHEITEN FÜR ÄERZTE UND STUDIERENDE. Von Dr. Hans Elsner, Spezialarzt für Magen und Darmkrankheiten in Berlin. Paper. Pp. 490, with Illustrations. Price, 12 marks. Berlin: Verlag von S. Karger, 1909.

HEALTH OF ANIMALS BRANCH [CANADIAN DEPARTMENT OF AGRICULTURE]. SPECIAL REPORT OF MALADIE DU COIT OR DOUBINE. Paper. Pp. 63, with illustrations. Ottawa: 1907.

SEVENTH ANNUAL REPORT OF THE DIRECTOR OF THE BUREAU OF SCIENCE, to the Honorable, the Secretary of the Interior. By Paul C. Freer, Director of the Bureau of Science, for the Year Ending Aug. 1, 1908. Paper. Pp. 79. Manila.

REPORT OF ST. MARY'S HOME FOR CHILDREN AND FREE DISPENSARY, Chicago. For the Year 1908. The Sisters of St. Mary, Incorporators. Paper. Pp. 34.

ANNUAL REPORT OF THE WASHINGTON HEIGHTS HOSPITAL OF THE CITY OF NEW YORK. For the Year Ending Sept. 30, 1908. Paper. Pp. 20.

ANNUAL REPORTS, COOK COUNTY HOSPITAL, CHICAGO, ILL. 1908 Paper. Pp. 48.

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